The Foreign Exchange Problem

By S. STERN

Vice-President — Columbia Trust Company

COLUMBIA
TRUST
COMPANY

Officers

WILLARD V. KING, *President*

Vice-Presidents

HOWARD BAYNE   FRED C. MARSTON   BENJ. L. ALLEN
ROBERT I. CURRAN

WALTER G. KIMBALL, *Treasurer*   CHARLES E. WOLFF, *Controller*
HOWARD E. RIDER, *Assistant Treasurer*   ARTHUR W. HUTCHINS, *Secretary*

Assistant Secretaries

GEORGE S. MILLS   OLIVER C. WAGSTAFF   F. COLSSON KELLY

W. J. PFIZENMAYER, *Auditor*

Trust Department

GEORGE E. WARREN, *Vice-President*   ORRIN R. JUDD, *Trust Officer*

Assistant Trust Officers

A. N. HAZELTINE   SAMUEL M. SPEDON   WILLARD C. MASON
W. MILLERD MORGAN   MELVILLE W. TERRY

Foreign Department

S. STERN, *Vice-President*
FREDRICK G. HERBST, *Mgr. Foreign Exchange Dept.*
JOHN MATTHEWS, Jr., *Mgr. Foreign Commercial Dept.*
EDWARD FROEDE, *Assistant Secretary*

Uptown Office

Vice-Presidents

HARRIS A. DUNN   J. SPERRY KANE

HENRY M. ATKINS, *Assistant Trust Officer*
ARTHUR DALY, *Assistant Secretary*
WILLIAM E. DOBBIN, *Assistant Treasurer*

Women's Department

VIRGINIA D. H. FURMAN, *Assistant Secretary*

Harlem Branch

VERNON P. BAKER, *Manager*

Assistant Managers

HERBERT I. ELFE   WILLIAM P. CARROLL

Bronx Branch

FRED BERRY, *Manager*

Assistant Managers

A. B. ATKINSON   HARRY WEISS

The Foreign Exchange Problem

By S. STERN

Vice-President—Columbia Trust Company

Second Edition

Foreword

For more than six years the commercial and financial activities of the world have been more or less seriously disturbed by the spectacular depreciation and the violent fluctuations in the prices of the principal foreign currencies.

What will be the final outcome of this perverse and seemingly chronic condition of the international exchange markets?

Day after day the banker is assailed by this question. The problem is one of the most vital of the hour. It is not only of direct concern to our people,—our producers, manufacturers, importers, exporters, and investors, but it also affects deeply the welfare and future of our friends and customers abroad.

As a contribution to public thought on the subject, we offer the present study made by our *Vice-President*, Mr. S. Stern. He has been assisted in connection with the research work and in the preparation of the charts and tables by Mr. H. A. Widenmann.

WILLARD V. KING,
President.

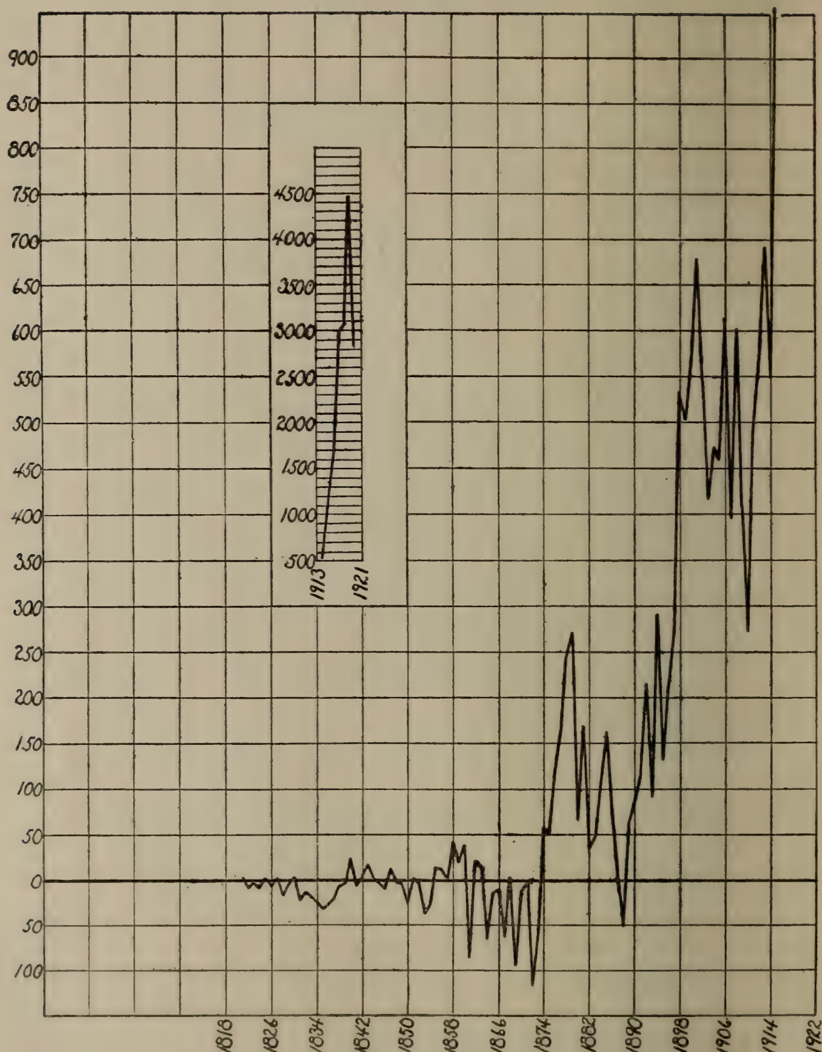
March, 1921.

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF CHARTS

No. 1



The Visible Trade Balance of the United States

BALANCE (net) of the merchandise, gold, and silver imports and exports between the United States and the rest of the world annually in $1,000,000.

Insert reduced to 1/10 of main scale.

A general note on the charts will be found on page 94.

I

The Foreign Exchanges up to the Outbreak of the World War

Basis of Foreign Exchange

Each transaction involving a settlement of accounts between different countries calls forth, directly or indirectly, demand for, or supply of foreign currency. A demand for bills of exchange is created by the necessity of certain individuals in one country to meet obligations in other countries. These obligations arise from merchandise imported, interest charges to be met abroad, services rendered by foreigners, and money sent or loaned abroad. A supply of bills of exchange is created for converse reasons.

International Settlement of Accounts in Normal Times

In normal times the method of liquidating ultimate balances between countries adhering to the gold standard[1] is the shipment of gold from the debtor to the creditor country.[2]

---

(1) Most of the important countries have adopted a monetary system based upon what is called the gold standard; under this system all money circulating in the country entitles the bearer to a certain definite quantity of gold which he can obtain upon application at some designated governmental agency (in the United States, at the Assay Offices, 23.2 grains of fine gold for $1.00, the price of an ounce of fine gold being $20.67). This gold in turn has a definite value for conversion into foreign money in all those countries which adhere to the gold standard. This system enables an individual in the United States to convert his paper dollars into gold and under normal conditions to obtain for this gold a certain definite and invariable amount of pound notes in England, franc notes in France, lire notes in Italy, etc., and vice versa.

In this study we have not referred specifically to the exchanges of those countries, few in number, which are still on a silver basis. The value of the silver exchanges in the gold standard countries is governed by the price of silver metal as expressed in terms of gold.

For the benefit of those readers who are not entirely familiar with the technical questions treated in this paper, we have endeavored, in so far as feasible, to explain briefly the fundamentals of the subject. This more elementary material, however, we have tried to embody in footnotes, so as not to disturb the continuity of the main text.

(2) Demand and supply are often compensated by means of "arbitrage" between the various countries; arbitrage means using a credit balance which

Our International Balance before 1914

During a period of eighteen years (1896 to 1914) the precious metal flowed into our country at the average rate of about $10,000,000 a year,[3] which amount represented the average credit balance in our favor on the international ledger. Our exports exceeded our imports at the annual average rate of $487,000,000; this merchandise balance combined with the money invested by foreign capitalists in our country offset all the debits against the United States and still left an annual average margin of $10,000,000 in our favor. The principal debits against the United States were: the interest charges on the continually increasing amount of foreign capital invested in this country; the indebtedness incurred by immigrants sending their savings back to Europe; the money spent abroad by American tourists and others.[4]

Course of Foreign Exchange under the Gold Regime

As long as a country is able and willing to settle the balance of its foreign debts in gold, the value of bills or credit items payable in such country in its own local currency is tantamount to a legal claim on the equivalent quantity of gold. As the cost

---

one country (United States) has with another (Great Britain) to liquidate a debit balance which said country (United States) has with a third country (France).

(3) See Chart No. 1, facing page 1; Charts 2 and 3, pages 4 and 9.

(4) U. S. Balance of Indebtedness 1896-1914

CREDITS	Annual Average
Excess of exports of mdse. and silver	$487,479,000
Net Capital borrowings from abroad	52,632,000
	*$540,111,000
DEBITS	
Net interest payable	$160,000,000
Tourists' expenditures	170,000,000
Immigrants' remittances	150,000,000
Net freight charges	33,737,000
Net imports of gold	9,153,000
Insurance premiums, commissions and misc. items	30,000,000
	*$552,890,000

*No balance since most items indeterminate.

Source: Harvard Review of Economic Statistics, Vol. 1—July, 1919. (Article by Charles J. Bullock, John K. Williams and Rufus S. Tucker.)

(freight, insurance, interest) of shipping such gold to the creditor country is subject only to slight variations, the price of foreign bills of exchange payable in countries known to fulfill their obligations under the gold standard is almost fixed and practically stationary. It can fluctuate from par[5] only to the extent of the shipping cost.[6] The quantity of bills offered is normally of no consequence. Sufficient demand to absorb them is created automatically through the banks; attracted by a small margin of profit, they buy the excess supply, however great, and convert it, after collection in the debtor country into gold first, and after its arrival in the home country, into their own currency.

This was the situation of the foreign exchanges up to the outbreak of the war. The value of the pound sterling (payable at sight), for instance, fluctuated during an uninterrupted period of thirty-three years (1880-1913) between 4.82 and 4.91 dollars;[7] the value of one French franc, between 19.04 and 19.60 cents (5.25 and 5.10 francs to the dollar);[8] the value of one German mark between 23.57 and 24.07 cents (4 marks were quoted between 94.3 and 96.3 cents).[9]

---

(5) The amount of one currency which in terms of gold would contain an equal quantity of fine gold as the unit of another currency; thus the gold par of sterling-dollar exchange is 4.8665 and $4.8665 of gold contains as much fine gold as one English pound of the same fineness as the U. S. standard dollar.

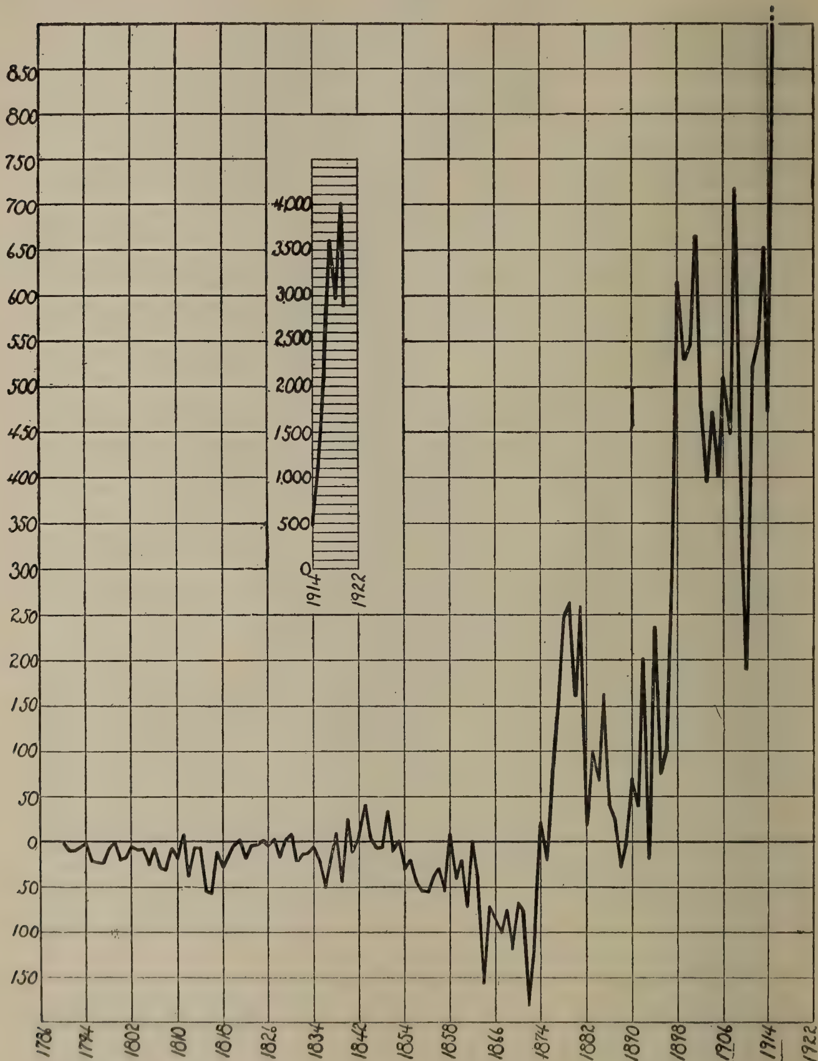
(6) The points at which it becomes cheaper to export gold, after making allowance for the shipping cost (if the demand for bills exceeds largely the supply) or to import gold (if the supply exceeds largely the demand) rather than pay the higher or accept the lower exchange rate, are known as the gold points.

(7) See Chart No. 4, page 14.

(8) See Chart No. 5, page 22.

(9) See Chart No. 7, page 32; also the Historical Survey, page 89.

No. 2



The Merchandise Balance of the United States

BALANCE (net) of imports and exports of merchandise between the United States and the rest of the world annually in $1,000,000.

Insert reduced to 1/10 of main scale.

For further comment on this chart see page 112.

II.

The Foreign Exchanges during and after the World War

Our International Balance since 1914

Since 1914 our exports have expanded on an unprecedented scale. Growing with every year of the war, our trade balance in 1919 aggregated $4,017,000,000. In 1920 it amounted to $2,949,000,000 in our favor. Imports from abroad decreased due to Europe's lower productive capacity and difficulties of navigation. We owed less for what in banking parlance are known as "invisible items"; viz., insurance, freights, and expenditures of American tourists abroad; we earned considerable amounts for freight carried by the young American Merchant Marine.

On the other hand, tremendous amounts were spent overseas by the American Expeditionary Forces and the numerous charity and relief organizations, whose activity has steadily grown since the armistice; moreover, private individuals have remitted appreciably larger sums abroad. Nevertheless, the annual debit balances against Europe, as represented by an excess of bills payable by her, increased vastly with every year.

International Settlements since 1914

There were, for a while, heavy shipments of gold,[10] much more important than the annual average of pre-war years; but

(10) Total Gold Imports and Exports (See chart No. 3.)

	Imports.	*Exports.*	
Aug. 1 1914— Apr. 13 1917..........	$1,491,065,000	363,789,000	*Excess Imports.* 1,127,276,000
Apr. 13 1917— Dec. 10 1920..........	746,341,000	1,026,237,000	*Excess Exports.* 279,896,000
Aug. 1 1914— Dec. 10 1920..........	2,237,406,000	1,390,026,000	*Excess Imports.* 847,380,000

From April 1917 to the end of the war, gold movements were small.

there was and is not enough gold in existence[11] to settle in this manner all the debts incurred by the various foreign borrowers, former belligerents and neutrals. Realizing this, the various governments early in the war imposed embargoes on exports of gold and have not officially lifted them up to this day.[12] Their debts were met in the major part by the liquidation of foreign-held American securities,[13] by the sale to us of foreign short and long term bonds,[14] by direct intergovernmental loans (the European governments borrowing from our government),[15] by open account credits, and the acquisition of bank balances and currency.[16]

Course of Foreign Exchange under the Paper Regime

The permanent or temporary elimination of gold as a final reserve to draw upon for purposes of foreign settlements was bound to have the most detrimental effects on the foreign exchange markets of the world.

In the European markets, both because of enormous purchases of foodstuffs, munitions, and war materials, and also, by reason of heavy remittances made to the United States and neutral countries by frightened capitalists, and speculators, the demand for the dollar and neutral currencies increased in enormous proportions.[17] The contrary phenomenon, of course, was

---

Since the lifting of the gold embargo by the United States in June 1919, the United States has lost much gold to the Orient, while little has come from Europe so that since April, 1917 exports from the United States have exceeded imports into this country.

(11) The present gold reserve in the Central Banks of Europe aggregates less than $3,500,000,000. See also Chart No. 6, page 26.

(12) With the exception of Great Britain, who has now lifted her gold embargo to the extent of permitting new gold mined in her colonies to be sold in the open market and exported. Sweden and Norway, during the war, imposed an import embargo on gold, and Spain bought gold at a discount; this was done to prevent belligerents from further flooding their country with gold in return for commodities, principally foods, which were growing more and more scarce.

(13) To the extent of four to five billion dollars.

(14) Which holdings are estimated to amount today to $3,000,000,000.

(15) To the extent of about $10,000,000,000.

(16) The total of these three items has recently been estimated to aggregate $3,600,000,000.

(17) The same symptoms were noted in regard to the pound sterling which appreciated in the other European centers.

experienced in the neutral markets including at the time the American exchange centers. Here offers of the currencies of the belligerents accumulated, due to supply arising, first, from legitimate trade and investment sources, and, second, from speculators who in the removal of the gold cover saw a point of weakness and a prospect for profit on the short side.[18] Formerly, when the gold points were exceeded, the banks were ready and anxious to fill the gap and to take up all the bills offered. This readiness has ceased with the restriction on the sale and export of gold. As soon as the actual or anticipated needs of the buyers for immediate or future delivery are filled, the excess is forced to seek an outlet at a price which will depreciate until new demands develop. Such new demands arise: (1) as the lower exchange rates facilitate new purchases of merchandise in the debtor countries;[19] (2) as individuals or corporations, tempted by the heavy discount on the former quotations, absorb the available exchange material, for investment or speculative purposes.[20] In the absence of new purchases of goods on the part of the creditor countries, and should the excess of bills not be absorbed by investment or speculation, there is but one alternative—a decline in the volume of exports and/or further exchange depreciation.

Exchange Fluctuations, 1914-1921

This was, indeed, what actually happened. At the beginning of the war, for a brief period, the foreign exchanges rose because we had to cover precipitately short term loans contracted in Europe (e. g. sterling reached $7.00 per pound; French francs 4.25 francs for the dollar=23.52 cents per franc; German marks $1.04 for 4 marks=26c. per mark). With this exception, the tendency of the foreign exchanges has been steadily downward. It has not been a smooth descent. The various exchanges fluc-

(18) See Chapter V. (c) on speculation.

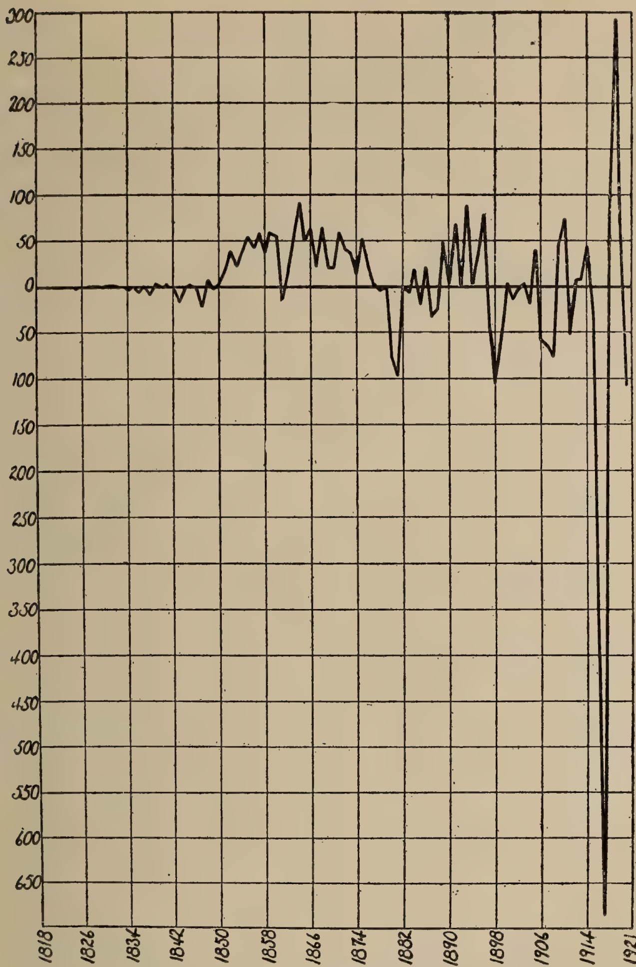
(19) Where prices, unless they are raised to the same extent as the exchange has declined, become more attractive for foreign buyers, thus creating a basis for renewed legitimate trade.

(20) Either in the shape of bills of exchange, of foreign currency, of transfers to their credit on the books of foreign or local banks, or of short or long term internal loans.

tuated, at times very violently. The supply of, or demand for, bills expanded or contracted, with the varying fortunes of war and the evolution of politics. The paramount question before the potential buyer of a foreign bill of exchange was during the war and will be for some time to come: What are the present political, economic, and financial conditions, and the future prospects of the country whose currency is offered? Are they such as to render reasonably sure, either the re-sale with profit (or at least without loss), or the ultimate settlement in gold, goods, or services? Those countries which experienced the greatest internal disintegration, also showed the most extensive exchange fluctuations.[21]

([21]) See Table No. Ib, pages 120-121.

No. 3



United States Gold Movements

BALANCE (net) of imports and exports of gold between the United States and the rest of the world annually in $1,000,000.

Gold imports for 1920 are shown inclusive of 108.5 millions of gold formerly held earmarked for account of the Federal Reserve Bank by the Bank of England and returned late in the year to this country. This amount, while increasing the stock of gold in the United States, did not affect the balance of payments, having been placed to England's credit during the war.

For further comment on this chart see page 113.

III.

The Present Foreign Exchange Situation

All factors influencing the exchanges act eventually either through the supply of, or demand for bills. As long as Europe obtained credits from our government and was able to float external loans or receive advances in various forms from our exporters, producers, manufacturers, speculators, investors, and banks, there was a more or less sustained demand to offset the supply of export bills pressing on the foreign exchange markets in ever growing volume. As the total aggregate of the foreign obligations of our debtors increased and their borrowing ability was reduced, because of the higher ratio of their commitments, to their available assets, the investment and speculative demand for foreign bills gradually slackened.

Potential Supply of Exchange

There is plenty of evidence that the need for goods continues unabated in Europe. The United States, the South American republics, and Great Britain, to a certain degree, are anxious to fill the pressing wants;[22] however, before current risks are increased to any such large extent as will be necessary, additional security to guarantee the repayment of further obligations is considered essential. Something of an *impasse* has been reached; on the one hand, there are important potential consumers, who are urgently in need of goods, but who have already amply used their credit lines; on the other hand, there are important potential producers anxious to strengthen the financial status of their debtors, and at the same time to increase their exports to them in order to market their excess production. To meet her heavy interest obligations and to pay for further necessary important quantities of raw material, commodities, and machinery, Europe

(22) The output of American factories for the twelve months ending June 30, 1920, has been valued at $50,000,000,000, or about 40% of the estimated total of the world ($120,000,000,000).

for the present cannot offer gold or merchandise, but only more paper obligations—more "long term foreign bills of exchange." This condition will prevail pending such time as Europe is able to produce and export goods in sufficient volume to pay for those bought and imported.

Potential Demand for Exchange

Whether or not these new obligations will be absorbed will depend first, on the ability and willingness of certain countries, particularly our own, to grant the necessary large additional credits and raise the important amounts required for loans; second, on the guarantees—material and moral—which the borrowers will be able to offer for the protection of their past and future commitments.

Inflation, dislocation of trade, and impaired credit—these have been the determining factors in the break of the exchanges since 1914. Will deflation, adjustment of international commerce, and regeneration of credit result in a reversal of recent foreign exchange history during the period in which we are about to enter? With the foregoing general survey of the subject as a background, it is proposed to search out the possibilities for such a development and determine:

1st. What is the present real value of a foreign bill of exchange?

2d: What are the factors which lower its real value?

3d: What are the factors which raise its real value?

4th: Under what conditions is either of the detrimental or favorable groups of factors likely to exercise a decisive influence on the movements of the foreign exchange markets in the immediate future?

The international exchanges are a delicate mechanism, governed, as has been stated, by the demand for, or supply of foreign bills. As a result of the war, both demand and supply are influenced more directly than ever before by commercial,

financial, and political conditions. Such conditions leave their impress on the exchange markets. The resultant rise or fall of the exchange rates often causes—in turn—by way of more or less immediate reaction, changes in the very group of factors which were responsible for the initial movement. Thus it will be found that the problem of, and the outlook for the exchanges are intimately connected with the present state and the probable evolution of the economic life and relationships of the various countries. As we deal with our subject it will, therefore, be necessary to discuss, both from the theoretical and practical standpoint, a number of diverse topics, many of which at first glance would seem to have little or no bearing upon it.

(*Explanation and comment referring to Chart 4 next page.*)

Fluctuations of Sterling Exchange

———— Annual high and low quotations of 60 days sight rates (number of dollars per £).

—·—·—· Exchange quotations in terms of United States paper currency (computed from the gold premium).

-------- 1861-1864 exchange quotations in terms of gold (computed from the paper quotations).

The quotations for the years 1788 to 1790 are those of the Philadelphia market (average annual rate only).

Those of 1791-1797 are Baltimore quotations.

From 1798-1825 we had to use Boston quotations; from 1825 on, New York quotations were available.

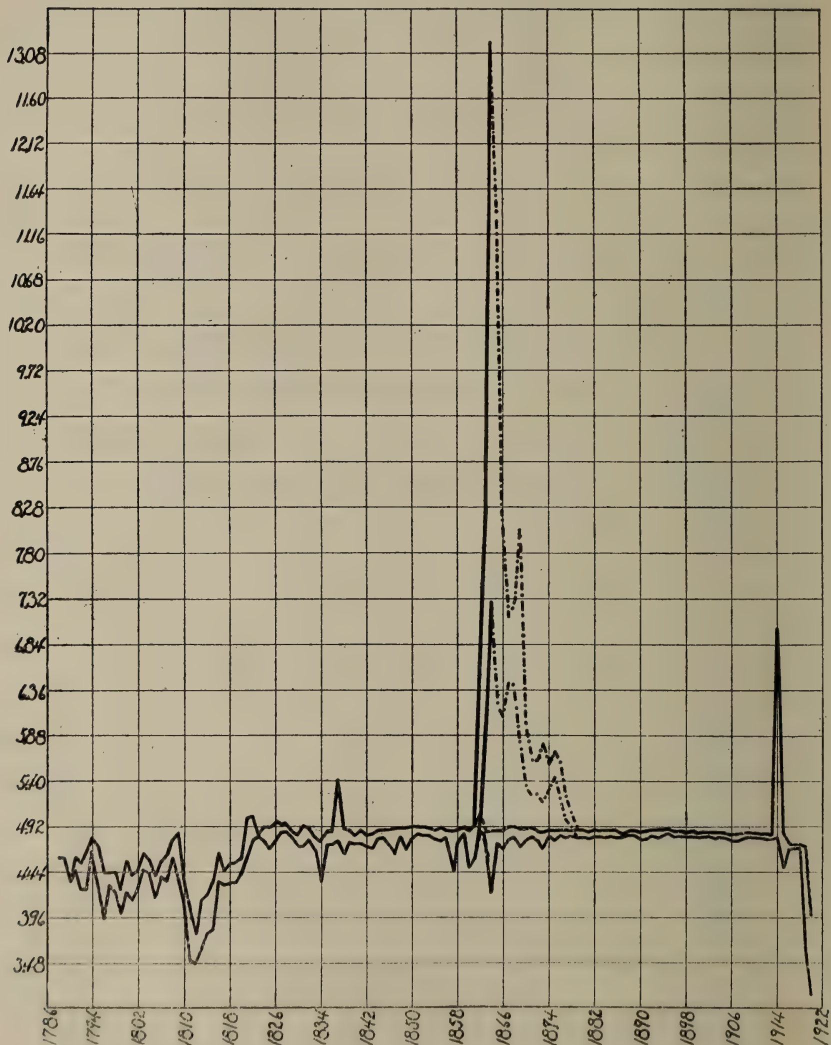
1914 high quotations, more or less arbitrary, having been computed from the cable rate (60 days sight rates for the early days of August 1914, not available).

Par: 4.44 4/9 up to 1834
4.87 1834-1837
4.8665 ... since 1837

1793 Crisis in England and outbreak of war with France.
1810 Crisis in England.
1812 War of 1812.
1825 Crisis in England.
1847 Crisis in England.
1847-48 Political disturbances all over Europe; war with Mexico.
1860 Large excess of exports from the U. S.
1866 Crisis in England.
1873 World crisis.

1815 Crisis and depreciated paper in England offset by disordered currency here.
1837 Crisis and crop failure in the U. S.
1861-65 Civil War.
1869 Black Friday—extensive speculation in gold in N. Y.
1879 Resumption of specie payments.
1914 Outbreak of Great War; Europe called its short term loans.

No. 4



FLUCTUATIONS OF STERLING EXCHANGE

For explanation and comment on this chart see previous page.

IV.

The Real Value of a Foreign Bill of Exchange Today

> "Cheap money is always discounted when people find that it is cheap."

All foreign currencies or accounts, credits, loans, in whatever form, can ultimately be transformed into foreign bills of exchange. As we have seen, prior to the war, a foreign bill of exchange represented at all times an implied and, if exercised, an effective claim to a certain quantity of gold having a certain definite and legally fixed price in all countries. Now, with the suspension of gold (specie) payments, the holder of a foreign bill offers to the prospective buyer merely a title to an equivalent amount of paper currency, inconvertible on its face, for the redemption of which no date is set or provision made. Such paper currency is admitted as a legal means of payment (legal tender), only in the country in which the bill is payable. The buyer of a foreign bill of exchange or bank-note has no longer the option of converting it into a definite quantity of gold as formerly. Therefore, in exchange for each dollar's worth of foreign currency, the American buyer (e. g.) wants to be able to obtain, if desired, one United States dollar's worth of merchandise.

New Factor: Price Level of Goods

Theoretically then, the bill will be worth just as much as the home value of the variable quantity of goods which the buyer may be able to acquire with it. This presupposes that such goods are permitted to be, and can be transported out of the seller's country and will find a purchaser in another country. In other words, holders and buyers of foreign bills will hence-

forth, whether consciously or not, appraise their value according to the relative price level of goods in the respective countries.[23]

The price levels of goods in the various countries have thus taken an unprecedented importance in connection with the course of foreign exchange. It is necessary, therefore, to consider in detail what factors influence the rise and fall of merchandise prices.

Price Level of Goods under the Gold Standard

Before the war, as a rule, approximately the same quantity of the same merchandise could be bought in most countries for the same amount of gold or—as gold was the standard adopted by most of the civilized countries—for the equivalent amount of circulating currency.[24] Of course, even prior to 1914 a certain difference in price levels was perceptible in all countries. Capital, merchandise, and labor did not move altogether freely from one country to another and the standard of living varied. Nevertheless, within narrow limits, it was true that, barring transportation and tariff differentials, higher prices in one country would immediately stimulate imports to that country, increasing the supply of goods there, and thus tend to level prices once more. Vice versa, lower prices in another country would stimulate exports from that country and thus raise prices in the exporting country or lower prices in the importing country, or both. It will thus be seen that the gold standard and freedom of commerce, aided by the co-ordinating action on production and consumption (resulting from the free flow of goods and credit from one market to another), kept price levels fairly uniform[25] in all those countries in which the gold standard was in force.

Price Level of Goods under a "Paper" Regime

Europe as a whole[26] has, for the time being at least, abandoned the gold regime and resorted to an inconvertible paper

(23) The speculator will, of course, also consider the possibility, however remote, of a return to some sort of a gold basis.

(24) See footnote No. 1, page 1.

(25) See Chart No. 10, page 50.

(26) This, however, applies, with certain reservations only, to those countries which were not participants in the war.

currency. The expansion in the circulating media was not counterbalanced by a corresponding increase in the stock of available goods; rather, due to the diminished productive capacity of the warring nations, was this supply decreased. The resultant shortage of merchandise was artificially aggravated by the withholding of goods from the markets for speculative purposes. Moreover, the difficulties of communication, deficiency in, or interruption of transportation, and vexatious customs rulings were, in some instances, responsible for violent price fluctuations and excessive premiums on urgently needed articles.

It was inevitable, therefore, that the increase in paper money should result in an unprecedented rise in prices in Europe. In our country there has also been inflation (notwithstanding the maintenance of the gold standard), but the upward movement of prices has been much less pronounced.[25] Thus, as prices ascended more and more in Europe, the exchange value in United States dollars of the individual unit of European currency became correspondingly of less worth.

Merchandise having been virtually adopted as the common denominator of the foreign exchanges and currencies, the fall which has been experienced since 1914 was to a certain extent nothing more than the legitimate result of an effort on the part of the holders and buyers of foreign bills to adjust the quotation of such bills to their actual merchandise value. For example, as prices rose in France, the franc would buy less and less; consequently the American importer paid less for it. To the extent that the foreign exchanges have receded from this cause, the descent was natural, necessary, and legitimate. In order to allow us to visualize this part of the decline more clearly, we shall call it the "gold discount." (The purchasing power of gold declines as a greater quantity of it has to be given in exchange for the same article.)

When are Foreign Exchanges Actually Depreciated?

Actual depreciation exists only when the foreign exchanges are quoted so low in United States dollars that the dollar buys more goods in Europe than here. In such a case, the American buyer of 1000 francs at 7 cents a franc, should he convert them

into goods in France and ship such goods to the United States, will realize *more* than \$70. Conversely, as long as there is actual depreciation, in order to create a credit balance in New York for goods purchased, the French importer instead of paying 1000 francs at home for a \$70 check on New York, will find it more advantageous to ship 900 francs' worth of goods to the United States and sell them here for \$70; he will make a profit of 100 francs. Again, under the same conditions, the American exporter, instead of selling for \$70 the draft for 1000 francs, which he has drawn on the buyer of the merchandise exported by him to France, can buy 1000 francs' worth of merchandise in francs, and sell it here for \$77. He will make an additional profit of \$7. This depreciation beyond the purchasing power value,[27] we might call the "undervaluation."

Our problem is now simplified. We distinguish, in considering the fall and the eventual restoration of the exchanges, between the justified "gold discount," as reflecting the reduced purchasing power of European currencies, and the temporary and often arbitrary "undervaluation."

Causes of Undervaluation

This "undervaluation" or real depreciation, as we shall see hereafter, is or may be due:

First, to the difficulty of establishing with exactitude or with even a fair degree of approximation, the actual purchasing power of foreign currencies in terms of merchandise.[28] The daily changes of domestic price levels of merchandise are not immediately reflected in the foreign exchange markets, but only after they have resulted actually in *foreign* sales or purchases. Even if the prices of the various commodities are ultimately levelled in the various countries, this adjustment does not take place *at the*

(27) The point at which two different currencies are theoretically equal in value, as expressed in merchandise, has been called the purchasing power parity.

(28) A comparison of exchange depreciation with prices of leading commodities, weighted according to their importance (comparable index numbers) would show the extent of any "undervaluation" in the exchanges of the respective countries. However, the available index numbers give very inaccurate results for such purposes. They do not contain the same commodities and they are constructed differently. For our purpose they should

same time because of the elimination of the action of the gold standard and money rates on the commodity markets, and because of the impediments to free commerce between the various national producing and consuming centers.

Second, to devices and regulations, such as export embargoes or prohibitive license systems, export tariffs (if they have been imposed by the debtor countries), the practice of charging higher prices to foreigners, import embargoes or tariffs (if they have been imposed by the creditor countries), or any other general or actual conditions that impede the free flow of commodities which normally would tend to harmonize the price levels.

---

contain only those goods which actually or potentially enter foreign trade. Allowance for this should be made in drawing conclusions from Tables Nos. 2, 3, and 4, (pages 122, 123, 124).

Perhaps the speculative tendencies and the fluctuations in the exchange markets to which we have referred might be curbed, to a certain extent, if all countries published weekly special index numbers, on a comparable basis, showing the average c. i. f. prices of those commodities which rank most prominently in their foreign trade with each of the other countries. For instance, the proper agencies in our country would prepare this special "exchange index" for Great Britain, France, Belgium, Italy, etc., and, vice versa, we would receive the "exchange index" from each of these nations. A comparison between the two indeces arrived at by, for example, the United States and Belgium, respectively, should then show approximately to what extent prices of merchandise exported from either the United States or Belgium are higher or lower in one country than in the other. Such a comparison, if its results were given wide publicity at regular intervals, would call the attention of bona fide holders of foreign exchange to the actual purchasing power value of the various currencies and would, in many instances probably, prevent them from dumping their holdings on the markets, or induce them to delay their sales until such moment when the temporary "undervaluation," due to the various causes which we have discussed, has been reduced.

Along similar lines, it would perhaps also be worth while to consider whether one part of the excellent work done during the war by the Division of Foreign Exchange of the Federal Reserve Board should not be perpetuated in some form, and, with the cooperation of the proper foreign agencies, generalized so as to include all the leading countries: we refer to the weekly statistics showing the total amount of, for instance, the dollar balances held in the United States by foreign correspondents, the balances held abroad in foreign currencies by American banks and business concerns, and their holdings in foreign bills and securities.

These figures, if regularly published, would, perhaps, go a long way to dispel the mystery in which the movements of capital, and the changing balances of indebtedness, are shrouded today, because of the lack of suitable records.

Third, to the fact that capital, because of the uncertain credit situation abroad or because of temporarily stringent conditions at home, is less willing to take advantage of more remunerative possibilities of employment in Europe; furthermore to the fact that speculation anticipates differences in price levels; i. e., differences in purchasing or producing capacity, changes in tariffs, taxes, and shipping costs.

Dispensing for the moment with a more detailed discussion of these factors, we may, nevertheless, draw this obvious conclusion: *The real value of a foreign bill of exchange today is its actual purchasing power value, as expressed in terms of merchandise. The exchanges cannot be permanently depressed below that purchasing power value. At some time or other initiative will revive. Present obstructive trade regulations, wherever they exist, will be removed. The more progressive and farsighted business men will then take advantage of any abnormal differences in the prices of goods to engage in new purchases. The more aggressive capitalists and the bankers, supported by an intelligent, efficient, and energetic administration, will always at the proper moment play their traditional role of pioneers in the marts of the world and thus help to restore to their purchasing power value, those exchanges which are actually depreciated.*

Fluctuations of French Exchange

———— Annual high and low quotations of 60 days sight rates (number of francs per dollar).

—·—·—· Exchange quotations in terms of United States paper currency computed from the gold premium.

– – – – – – 1861-1864 exchange quotations in terms of gold, computed from the paper quotations.

- - - - - - - - 1921 quotations to February 18th only.

Average annual quotations only for the years 1789-1792, 1815, 1818-1820.

Philadelphia quotations up to 1825.

New Orleans quotations 1846-1849.

1914—high quotations more or less arbitrary, having been computed from the cable rate (60 days sight rates for the early days of August 1914, not available).

Furthermore, from 1883, whenever there were no 60-days sight quotations, they were computed from sight or cable rates.

Insert reduced to 1/8 of main scale.

Par 5.18.

Par in first part of the last century actually 5.34; practically, considering French seignorage charges it was about 5.26.

1789 French revolution—financial disorders which came to a climax in the terrific crisis of 1796 brought about by the excessive issues of assignats.

1826 Commercial depression in Europe, especially England.

1830 Political disturbances.

1847-48 Political disturbances all over Europe; war with Mexico.

1860 Large excess of exports from the U. S.

1866 Crisis in England.

1815-16 Currency disorders here offset financial and political situation in Europe.

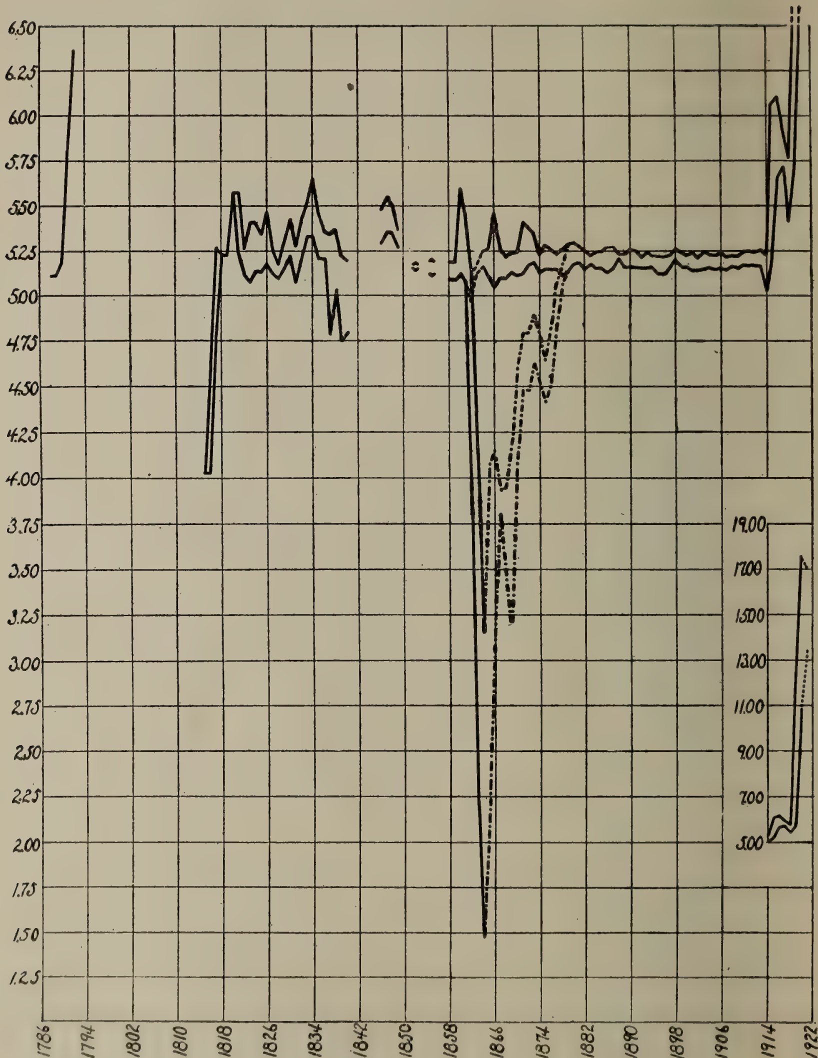
1837 Crisis and crop failure in U. S.

1861-65 Civil War in the U. S.

1870-1 Franco-Prussian War.

1914 Outbreak of the Great War; Europe called its short term loans.

No. 5



FLUCTUATIONS OF FRENCH EXCHANGE

For explanation and comment on this chart see previous page.

V.

Factors which have Lowered the Foreign Exchange Quotations

(a) CURRENCY DISORDERS: INFLATION.

We have found that the most important factor explaining the heavy decline of the gold value of European monetary units is the rise in prices of merchandise in Europe; furthermore, that this rise of prices is chiefly due to the expansion of circulating media.[29]

Inflation and the Government

This increase was caused primarily by government expenditures for military and reconstruction purposes. For almost seven years most of the European governments, with the single exception perhaps of Great Britain, have spent more than they have raised by their current annual revenues. In so far as governments paid for their purchases in new currency without collecting corresponding amounts in taxes coming from actual savings of the citizens, there was bound to be inflation.[30] Where the governments did not actually print paper money,[31] inflation was achieved through various indirect means, as, for instance, borrowing from the note-issuing banks on open account, or against short or long term treasury bills, or by way of the flotation of internal loans.

---

(29) For our purposes we may include in this term: I. Currency. (a) Coins other than gold; (b) paper money, being the obligation of either the government or the banks of issue; II. Bank credits or deposits with which, by means of checks, payments are made; III. Bonds of internal loans and postage stamps in so far as they are used instead of currency—in short, anything that is being used as an instrument of payment.

(30) Increase in circulating media without corresponding increase in gold or goods.

(31) See Chart No. 8, page 38.

Domestic Regulation of Prices and Government Subsidies

Another important factor in the continuous process of inflation was the endeavor to keep prices of certain products below the level which they would normally have attained. In this category belong the practices, in many cases inevitable, of fixing legally maximum prices on coal, sugar, bread, etc., as well as selling certain articles or services, e. g., railroad transportation, below cost. When such price-fixing was found to be insufficient to relieve the population from the continually climbing merchandise prices of commodities, certain classes in the community were, in addition, granted business or unemployment bonuses or allowances. With some commodity prices artificially low, the consumption of goods was maintained on a high level except in such cases where the supplies to individuals were rationed or where the public responded to patriotic appeals for economy. In normal times the higher prices would have reduced consumption *ipso facto*. During the abnormal war years, people, on the one hand, consumed more, while, on the other, the pressure to produce more was relaxed. The government expenditures involved in price-fixing and similar schemes have been considerable. The various governments to a greater or lesser extent have been unable to acquire enough real savings by taxation or borrowing to meet these large outlays.

Thus government expenditures of all kinds contributed to make the total fiscal commitments so expensive for the treasuries that the only alternative open to them was to resort to the creation of new banknotes or to borrow additional excessive sums from the banks or the people with the same ultimate effect.[32]

([32]) During the war the volume of paper money in circulation in the world increased annually at the rate of $9,000,000,000. In the first year after the armistice the increase amounted to $12,000,000,000 and in the second to $25,000,000,000. In the year 1913, the paper money in circulation all over the world amounted to $7,500,000,000; now it has risen to $82,000,000,000. The ratio of gold to paper circulation was 66.3% in 1913; at the time of the armistice it stood at 17.6% and has now fallen to 9.2%. The public debt of the nations amounted in 1913 to $43,000,000,000; it amounts today to $300,000,000,000. Before the World War the interest service of the public debt demanded $1,750,000,000 annually. Now more than $12,000,000,000 is required. (For all these figures the 1913 currency values have been employed. The paper emissions and financial transactions of Soviet Russia are not included.) Source: The Americas.

Inflation and Business

The increase of commercial and private demand for capital and credit during and after the war has been another factor responsible for inflation. Business houses and individuals had to raise important amounts in order to pay the heavily increased taxes or to subscribe to government loans. To the extent that this was done without either reducing consumption or enlarging production (thus creating savings), to the extent that revenues were not increased or investments disposed of, the banks were called upon for advances, loans, or credits. In other words, in so far as tax receipts or loan subscriptions did not come from new real savings, there was necessarily further inflation.

Inflation and the Banks

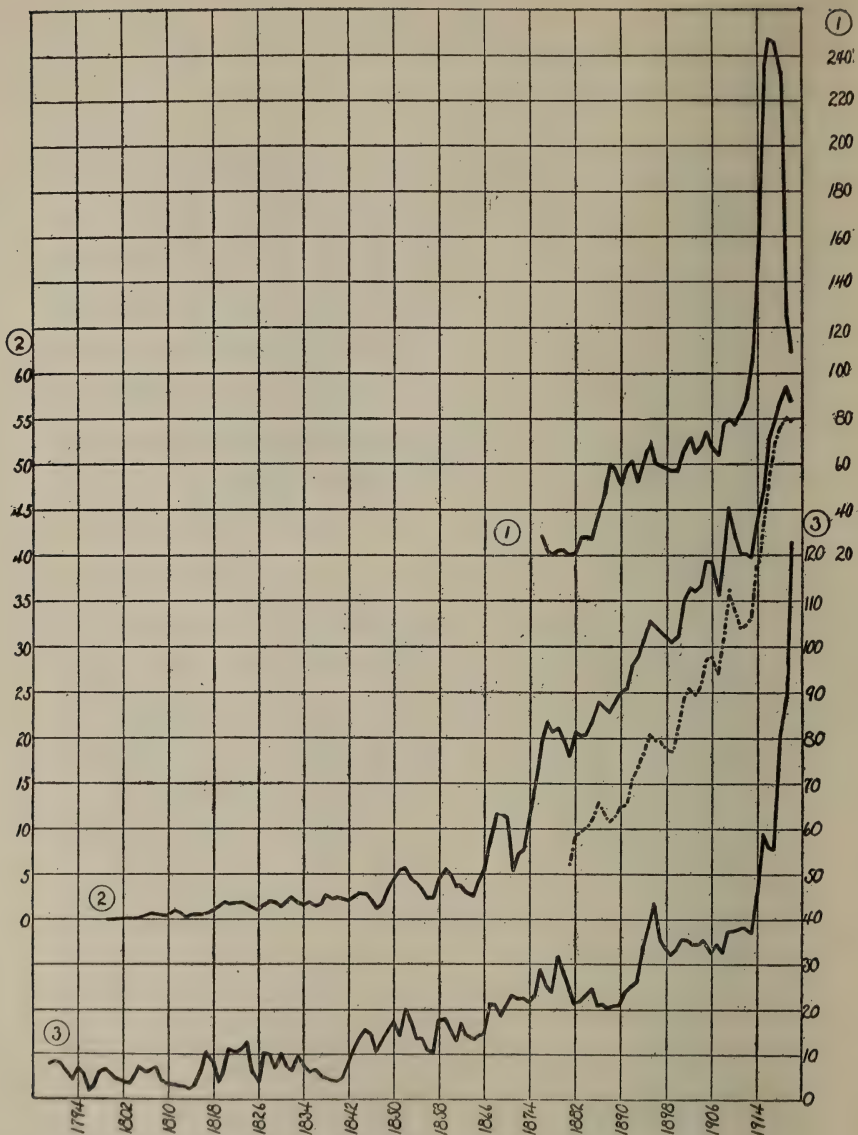
In normal times, most of the paper money and checks put into circulation find their way back to the banks after a relatively short circuit. They pass through the hands of the producers, manufacturers, and distributers who have furnished raw materials or finished goods to the government or private consumers, and through the hands of those who have labored either for the government or individuals. Sooner or later they come back to the banker in the form of cash deposits made by any of these classes.[33] There is thus a normally continuous large stream of deposits. Inflation has tremendously expanded this volume of deposits.[34]

The heavier liabilities involve: 1st, increased capital and surplus on the part of the banks in order to furnish to their customers proportionally greater guarantees for the proper administration of their larger deposits; 2nd, additional investments, either in the form of commercial bills, or loans on securities or merchandise, or short term treasury bills; 3rd, as far as these deposits emanate from business firms or corporations, they are used, when necessary, as partial guarantees for loans required for the extension or development of their trade.

([33]) During the war the practice of hoarding money once more became prevalent in order to avoid the payment of taxes or capital levies.

([34]) See Chart No. 9, page 46.

No. 6



Gold Reserves

Bank of England: (3) Average annual holdings of gold coin and bullion in £1,000,000.

Bank of France: (2) Average annual holdings of gold and silver coin and bullion in 100,000,000 Francs.

—.—.—. Average annual holdings of gold coin and bullion in 100,000,000 Francs.

Bank of Germany: (1) Average annual holdings of gold coin and bullion in 10,000,000 Marks.

The banks, guided by patriotic and business motives, were induced to satisfy the demands for credit on the part of the government and the industrial community as liberally as the due regard for the interests of their depositors would permit. The governments were obliged to repeat their appeals with greater and greater frequency. Private enterprises borrowed in order to enlarge plant and output, both for the public benefit and for their own personal advantage. Thus a new factor making for increased buying capacity was given. In addition, competition among banks, facilitated in some instances by the removal of bank reserve requirements or by the more liberal discount policy of the central reserve banks, has brought about in Europe less discrimination and less inclination than under normal conditions to restrict and reduce credits. Even this situation is due in a measure to unwise government finance. When the state absorbs the savings of the people, and when the community, prompted by a sense of self-preservation and a desire for continuous progress, calls for unhampered agricultural and industrial expansion, the banker in times of national emergency may be expected to lay aside some of his natural conservatism.

Inflation and the Money Market

These demands for commercial and private credit were the more pressing as the brakes formerly applied in the form of higher rates of interest could not be sufficiently used, especially during the war. The governments, in order to float new and fund old loans under favorable conditions, were primarily interested in maintaining low rates;[35] moreover, in certain cases, they desired to veil the deterioration of their credit. Industry, on the other hand, is generally opposed to high rates of interest because they increase its charges and seem to restrict legitimate expansion. Thus in all European countries, rates of discount charged by the banks have been below the level dictated by the paucity of actual capital (goods, not paper money).

Furthermore, higher discount rates in the absence of the gold standard do not curtail loans as effectively and directly as

(35) See Charts Nos. 12 and 16, pages 56 and 74.

formerly: first, because a rising discount rate no longer attracts gold or credit from abroad; second, because interest rates have become a much smaller item in the cost of production, so that a higher rate of interest does not weed out the unessential borrower.

The money market is governed—just like any other market—by the law of supply and demand, and if the latter exceeds by far the former, the need for restriction through the screw provided by the rate of interest makes itself felt. A discount rate below the natural level which corresponds to the supply and demand of capital goods, favors the artificial creation of credit.

Effect of Inflation on Income

To the amount of money normally circulating in a community is added as a result of inflation a much larger amount (without a corresponding increase in the volume of actual goods). This new supply of money will circulate at a par with the currency already in existence. Prices in general will rise against all individuals in the community. However, those who, for goods delivered or services rendered, have received a larger proportion of new currency, will be placed in a more favorable position than those whose pre-inflation income (capitalists living on their interest, dividends, or insurance moneys; public officials, whose salaries are more or less stable), has not been increased, or only insufficiently.

Effect of Inflation on Bond Values

Let us take the specific case of a bondholder. While with inflation almost all commodities rise in price, the market level of bonds is hardly affected, except to the extent that it may oblige small holders to part with past savings. The investor's one thousand franc bond is not converted into a two thousand franc bond when prices have risen one hundred per cent, but remains a one thousand franc bond, the purchasing power of which may have been halved. He has to contribute his share to the increased charges of the community of which he forms a part; other components of the community, through the general

effect of inflation on their income, may be in a position to bear these higher expenditures without direct personal sacrifice. The bondholder, to the extent that his income is derived from the interest on his holdings, will have to carry without adequate material compensation his full part of the burdens of inflation except in so far as such inequality is corrected by income and excess profits taxes on a sliding scale.

Ultimate Effects of Inflation

Like the bondholder, all classes with a stationary income will be compelled by the reduced purchasing power of their revenues either to save less or to reduce their standard of living; on the other hand, those who have profited by the increased amount of currency have an excess of purchasing power which they may or may not use for investments making for increased production. The result is that, in many instances, certain commodities which are really needed are not produced in sufficient quantities, while others which are unessential are sometimes produced in large volume. An abnormal relation of production to consumption is created.

Inflation, if unduly prolonged or if not counteracted with sufficient persistence and energy, will lead ultimately with increasing acceleration to economic disintegration. The continually widening gap between production and consumption creates difficulties which may become a cause of hardship and often of civic unrest.

If the temptation to work the printing presses instead of the factories is not checked efficiently, the quantity of goods available for exchange into paper money will become more and more scarce; the manufacturers to part with their valuable products will require ever greater quantities of it, and finally may decline to receive it. This was the case in our own country after the Revolutionary War when the barber shops were wall-papered with useless continental notes and whence originated the expression "not worth a continental."

Such a condition in its most acute form paralyzes, temporarily at least, all business and credit transactions, until the

value of the existing currency is stabilized or until another currency is established and has gained the confidence of the producing classes of the community.

As regards the effect of inflation on the foreign exchanges of paper standard countries, it can best be illustrated by some hypothetical examples: (1) If country A inflates and country B inflates at the same rate, the exchange between them will remain numerically stationary, all other conditions being equal; (2) If country A inflates more than country B, or if country B deflates while country A's currency remains unchanged, or is inflated, the exchange of country B will rise in country A; (3) If country B inflates more than country A, etc., the contrary exchange movements will take place; (4) If country A inflates to a greater extent than country B, A's exchange in country C will be quoted at a higher discount than that of country B. In other words, the foreign exchange of country A is nothing but the comparison of the domestic purchasing power value of its currency with that of the currencies of countries B and C. But, at the same time, it must be borne in mind that the exchange value of country A as quoted in countries B and C may temporarily be raised or lowered through conditions or circumstances which concern only countries B and C (e. g., danger of revolution in, or war between countries B and C or D causing heavy purchases of bills payable in country A). In other words, fluctuations may occur in such contingencies independently of any considerations connected with international price levels, and, in fact, in apparent temporary contradiction to the principles laid down in this chapter.

Summarizing: *Inflation causes a general rise in prices of merchandise. It therefore results in a proportionate decrease of the real value of the currencies, as expressed in terms of merchandise. To the extent that this decrease in value reflects their reduced purchasing power, no permanent or legitimate enhancement of such currencies is possible unless the purchasing power is again raised. It can be raised only by a reduction of the quantity of money in circulation, or by an increase of goods, or both.*

(Explanation and comment referring to Chart 7 next page.)

Fluctuations of German Exchange

———— Annual high and low quotations of 60 days sight rates (number of dollars for 4 marks).

—·—·—· Exchange quotations in terms of United States paper currency (computed from the gold premium).

-------- 1861-1864 exchange quotations in terms of gold (computed from the paper quotations).

1815-1829 Baltimore-Hamburg marc banco, quotations converted to the present standard.

1833-1840 New York-Hamburg, marc banco, quotations converted to the present standard.

1858-1871 New York-Berlin, quotations converted to the present standard.

From 1888, whenever there were no 60 days sight quotations available, they were computed from sight or cable rates.

1914 high quotations, more or less arbitrary, having been computed from the cable rates (60 days sight rates for the early days of August 1914, not available).

1917-1919 No quotations.

1815-6 Currency disorders here offset financial and political situation in Europe.

1837 Crisis and crop failure in the U. S.

1861-65 Civil War.

1826 Commercial depression in Europe especially in England.

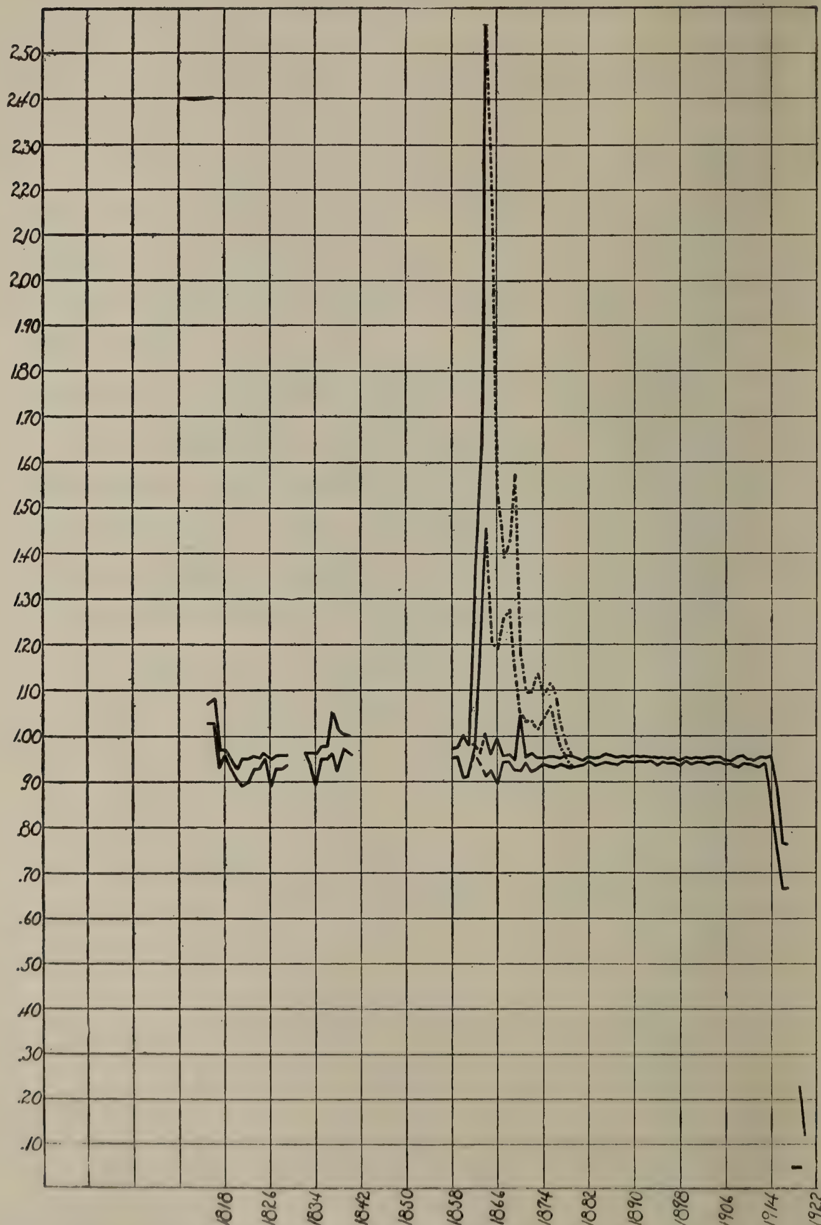
1860 Large excess of exports from the U. S.

1866 Crisis in England.

1870-1 Outbreak of Franco-Prussian War.

1914 Outbreak of the Great War.

No. 7



FLUCTUATIONS OF GERMAN EXCHANGE

For explanation and comment on this chart see previous page.

V.

Factors which have Lowered the Foreign Exchange Quotations

(b) TRADE DISTURBANCES.

Relation of Exchange to Foreign Trade

The fall of the exchanges being due primarily to inflation, we have attempted to analyze the effects of inflation on the domestic economy of the countries suffering from this affliction. Let us now proceed to examine the relation of inflation to foreign trade.

As we have seen, inflation as it proceeds will cause successive downward revaluations of the foreign currencies. This descending movement, due to the abnormal variations in the price levels of goods, caused by inflation, is not a smooth, but an oscillating one. (Fluctuations are also brought about by speculation in exchange, the causes and extent of which are discussed in the following chapter.)

If the downward movement proceeds smoothly, and as long as during this adjustment the exchanges do not differ too radically from their actual purchasing power value, foreign trade is not affected in very vital fashion by this gradual departure of the currencies from their former stable gold parities.

After all, the question for the American importer is only whether he can sell to a responsible buyer, with a reasonable profit, the goods which he contemplates buying; for the American exporter the only important consideration is the possibility of selling to a buyer of good credit standing, with a reasonable profit, the commodities, the purchase of which he is considering. Both the importer and the exporter, before concluding the trade, will establish the total cost of the merchandise either at this or the other end, in United States dollars. Into this total cost enters the cost of the merchandise, the freight, insurance, interest, and exchange. The importer will make a

saving whenever there is an "undervaluation" of the foreign currency. The exporter, all other conditions being equal, may have to make allowance for such undervaluation in his calculation, by offering a proportionately larger quantity or better quality of goods than his foreign competitor, whose exchange does not command so high a premium as his own currency.

Thus the fate of many a deal may hinge on the question of whether the saving made by the importer or the concession imposed on the exporter (either in the price or quantity or quality of goods) is larger or smaller; for in the one instance the cost of a specific article may be so high, and in the second instance, the proceeds of the sale of a specific article may be so low, that the trade not being profitable, the transaction may have to be abandoned, or the order may not be secured.

Relation of Exchange to Particular Lines of Business

Of course, the effect of an actual depreciation of exchange is not the same in the various countries and on various products. To illustrate: The exporter of cotton to France may have a margin of profit while the manufacturer of steel cannot export his product. The explanation is that the price of cotton in France may have risen sufficiently to make up for the depreciation of the franc, while French bids for steel have not been raised to an adequate extent. In such a case, it might be said that the exchange stands in the way of business, because the price of steel rendered at a French port, taking into account the exchange as one of the components of the cost, will not correspond to the domestic French quotations.[36]

Exchange and the American Importer

Bearing in mind that exchange oscillations react differently on different lines of business, we may nevertheless lay down the manner in which, as a rule, the principal categories of merchants are affected. Practically, the *American importer* pays today fewer dollars for one thousand pounds, one thousand francs, or one thousand marks, than in 1914, but this apparent saving is offset to a great extent by the fact that, owing to the rise in prices of merchandise, these thousand pounds, thousand

---

([36]) See also example page 89.

francs, or thousand marks buy today a much smaller quantity of goods. On the other hand, if he invests the same amount of dollars, namely, $4,866.50, $192.94, and $238.18, he receives a much larger quantity of pounds, francs, and marks; viz., £1247:16:4, fcs. 2,572.53, mks. 14,010.59.[37] If there is real depreciation, in spite of the rise in prices which has taken place in the meantime in Europe, these £1247:16:4, fcs. 2,572.53, or mks. 14,010.59, converted into merchandise in the respective countries will generally yield him more goods, in quantity or in quality, than he would have received in merchandise before the war for his £1,000, fcs. 1,000, or mks. 1,000.

Exchange and the American Exporter

The *American exporter*, who prior to the war obtained for merchandise invoiced at $1,000 respectively, £205:9:9, or fcs. 5,183.16 or mks, 4,198.50,[38] now receives for a bill of goods invoiced at $1,000, £256:8:3, or fcs. 13,333.33, or mks. 58,-823.53;[37] but in view of the rising prices in terms of paper money in Europe, this large quantity of European currency may not secure as great a quantity of merchandise as the corresponding $1,000 would buy of merchandise in the United States. The American exporter will always quote his European customer a price in European paper money which, if reconverted into goods, will reimburse him with a reasonable profit for the $1,000 he invested. This American export price will in many cases be higher than the foreign importer[39] would have to pay elsewhere, because the exorbitant premium on the American dollar abroad will generally absorb all, if not more than, the difference between the prices of certain goods in the United States (gold prices) and the prices of the same goods abroad (paper prices converted into gold at the prevailing rate of exchange).

([37]) Calculated at the approximate rates quoted in New York on February 15th; viz., $3.90 per pound, 7.50 cents per franc, 1.70 cents per mark. We have chosen for purposes of illustration the pound, the franc, and the mark, as being typically representative of the varying degrees of depreciation now prevalent in the exchange markets.

([38]) Calculated at the gold pars of $4.8665 per pound, 19.294 cents per franc, and 23.818 cents per mark.

([39]) This remark has also an important bearing on our South American trade.

Exchange and the European Importer

Conversely, the *European importer*,[40] irrespective of the possible general rise of merchandise prices in the United States, has to pay a much larger amount of his own currency because of its reduced purchasing power and the possible additional undervaluation for goods bought in the United States; namely, £256:8:3 for $1,000, fcs. 13,333.33 for $1,000, mks. 58,823.53 for $1,000; if he spent only the same amount of his own currency as before the war; namely, £205:9:9, fcs. 5,183.16, or mks. 4,198.50, he would receive a much smaller quantity of merchandise.

Exchange and the European Exporter

The *European exporter* before the war obtained for £1,000, fcs. 1,000, or mks. 1,000 of merchandise, respectively, $4,866.50, $192.94, and $238.18. Now the European exporter can buy in the United States with the proceeds of certain goods which in England, France, and Germany would sell with a normal trading profit, respectively, at £1,000, fcs. 1,000, and mks. 1,000, other goods which if sold at home will yield him a sum in dollars which will be greater or smaller than these amounts (e. g., $3,900, $75, and $17[37]) according as pounds, francs, or marks are quoted here below or above their actual purchasing power value. The profit resulting from any undervaluation is lost if the European exporter, rather than convert his dollars into a check or cable transfer for pounds, francs, or marks, uses the yield in dollars to buy actual goods in America; for, if there is undervaluation of foreign currency in the United States, this means that the same quantity of the same goods in the United States cost more than it would cost abroad, all other conditions being equal.

The most serious difficulties encountered by traders in the pursuit of their foreign business are: First, the violent fluctu-

---

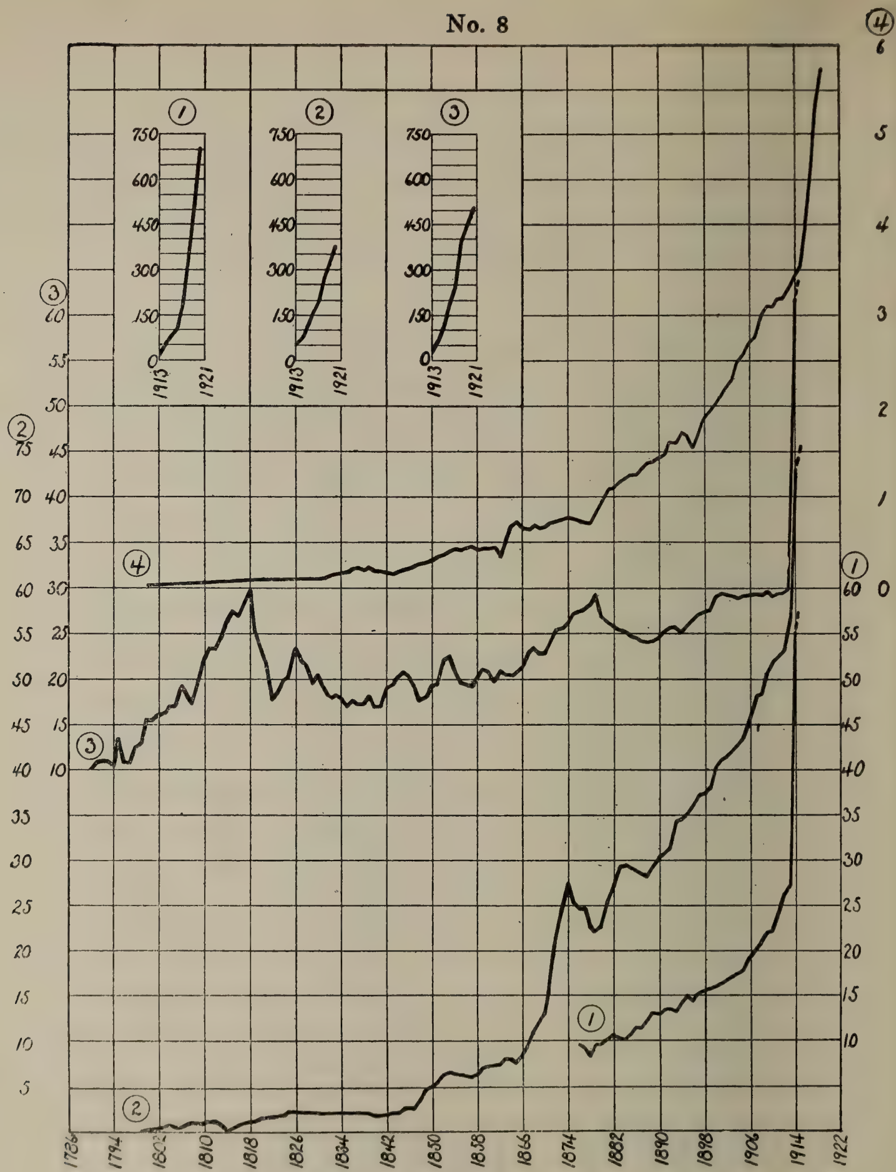
([40]) Although in this study we have more especially considered the conditions in European nations, yet our remarks apply, in general, with equal force to our trade with all other countries where the dollar is quoted at a premium.

ations of the exchanges which render commerce more hazardous both as regards profits and risk; and second, any real depreciation beyond the purchasing power value.

Exchange Fluctuations and Future Merchandise Contracts

Of the two obstacles, the constant wide upward and downward swings (due to causes which have been commented upon elsewhere[41]) are especially detrimental where transactions involve future delivery. In some cases, when normal methods of compensation fail, barter facilitates the exchange of goods; however, to carry on international business on its present scale is hardly possible on this basis. To move the enormous quantities of goods which make up the world's trade, there is necessary, not only money, but also and chiefly, credit. It is difficult to finance appreciable quantities of goods on credit until the purchase or sale price can be established exactly, or with a fair degree of certainty; i. e., until the value in the importer's or exporter's own currency is definitely fixed, by means of future contracts of exchange. If the date of settlement is postponed, either the buyer or the seller, or an intermediary, must bear the exchange risk. This hazard cannot be completely eliminated by the clearance of spot transactions in view of the interval which must elapse between the date of conclusion of the trade, and the date of the shipment or of the payment of the cost, or the collection of the proceeds of the sale. The importer will want to protect himself against a rise in foreign exchange, and the exporter will desire to protect himself against a fall. Someone has to assume the role of guaranteeing either of the interested parties against these contingencies. The speculator, as time went on, was less and less anxious to assume this role. The local banks, in like manner, have been more loath, considering the important amounts and the greater risks, to underwrite, as it were, this exchange insurance, unless they were able, according to good practice, to cover themselves by means of offsetting contracts in one of the leading markets. From a practical standpoint, the American exporter has been somewhat favored in this con-

(41) See page 51.



Money in Circulation

United States: (4) Total money in circulation in $1,000,000; being total of paper and coin minus the coin and paper held in the Treasury; it includes Federal Reserve currency from 1916 on.

Insert reduced to 1/10 of main scale.

France: (2) Annual average of the notes of the Bank of France in circulation in 100,000,000 francs. The figures up to 1807 are the annual average of the high and low point of the circulation for the year.

Insert reduced to 1/10 of main scale.

Great Britain: (3) Annual average of total notes of the Bank of England held by the public in £1,000,000. Figures from 1914 on include currency notes.

Insert reduced to 1/10 of main scale.

Germany: (1) Circulation of the Reichsbank and other banks (which decreased from 19 to 5 during the period) at the end of each year in 100,000,000 marks. Beginning with 1914 the circulation of the War Loan Association Certificates has been included.

Insert reduced to 1/10 of main scale.

nection. Due to a belief in the ultimate recovery of certain foreign exchanges, there has been quoted here almost constantly a more or less heavy premium for these exchanges for forward delivery (Sterling, French and Belgian francs being the most prominent).[42]

Exchange Fluctuations and Price Movements

Violent fluctuations in the exchange rates may overthrow all cost calculations, either for the buyers or the sellers. Let us illustrate this by one concrete example: An inspection of the movement of cotton prices respectively in New York, Liverpool, and Bremen shows that in September 1920, cotton prices fell in New York and to a less extent in Liverpool; Bremen prices showed a remarkable rise in terms of marks. The fall in cotton prices in New York was attributable to the prospects of a better crop, to the abstention of the buyers, and to the threatening prospects of an English coal miners' strike which, it was felt, would decrease the spinners' demands for cotton. These same factors also caused the fall in Liverpool cotton prices; New York exchange on London receded somewhat in September, which accounted for the fact that Liverpool cotton prices did not decline so much as New York cotton prices. On the Bremen market, however, the above price movements lost all their effect, since the quotation of dollars in Germany, in terms of marks, rose about 25% in the same month, thus raising considerably the cost of American cotton to Bremen merchants, although the price of cotton free on board New York had heavily declined. This demonstrates how under present conditions commodity prices fail to respond similarly to similar trade conditions the world over.

Effect of Real Exchange Depreciation on Foreign Trade

While it is true that, as a rule, low exchanges *per se* are not a hindrance, a truly adverse exchange tends to restrict interna-

---

(42) A clearing house for dealing in foreign exchange futures has been established at Antwerp as a means of protecting Belgian purchasers of foreign goods against exchange fluctuations.

tional commerce. When the foreign exchanges are quoted *below* their purchasing power, the importation of goods by the debtor countries having debased currencies is discouraged and the export trade of those countries which enjoy the doubtful privilege of having their currency quoted at prohibitive premiums is endangered. Unless precautionary measures are taken, the internal economy of the creditor countries may more or less seriously suffer from the increasing flow of alien products attracted by the export premium granted, as it were, to the foreign exporter. Isolating for the moment two countries: When France imports more from the United States than France exports to the United States in goods or in services, and the deficit is not made up by a credit extension from the United States to France, and exchange is not automatically restored by gold movements, exchange must depreciate at least temporarily below the purchasing power value. This decline will immediately make it profitable for France to send to the United States certain goods which she could not ship while the exchanges had their former purchasing power. At the same time, and for converse reasons, it would become unprofitable for the United States to forward certain goods to France. Exports from the United States will necessarily be impeded when the franc is quoted here lower than would correspond to the general level of merchandise prices prevailing in France as compared with that of the United States. When France buys goods from the United States, in addition to paying higher prices (as compared to pre-war levels), she must pay the freight, insurance, interest, and the premium on the dollar. Therefore, the more the foreign exchanges decline below their purchasing power; i. e., as the undervaluation grows, the more goods will be eliminated from the list of materials or articles which can be imported by the debtor country.

Those commodities or products which are most needed—foodstuffs, clothing, and coal—foreign consumers will attempt to import at whatever cost, and however low their exchange may drop. As far as other commodities or products are concerned, they may be exportable or importable to a greater or lesser extent, not because of numerically low exchange rates, but because the inflation policy in one or both of the countries con-

cerned has brought it about that a greater or smaller quantity of such particular commodities has been produced or consumed than would otherwise have been the case. The goods that are really needed are often not imported in adequate quantities, because their prices are not high enough to attract imports from abroad. The demand of the people who need these commodities is not effective because they cannot pay in gold or goods for their purchases. On the other hand, certain individuals who control sufficient purchasing power may use it, in the absence of legal restrictions, to import luxuries rather than essential goods. Therefore, the decline of the foreign exchanges will *not* necessarily eliminate, in the order of their usefulness, the various commodities and products from the list of importable articles.

With the growing decline in exchange caused by the adverse trade balance, more and more commodities have become exportable from Europe. As a result, some European governments, viewing with alarm the increasing size of the stream of goods, which, although urgently needed at home, flowed out of their countries, have limited their exportation by various devices. They have imposed embargoes, adopted licensing systems, or rationed the volume of exports.

All these measures on the part of countries with unfavorable balances of indebtedness will cause their exchanges to depreciate even beyond their purchasing power value. What is the value of a draft for a thousand Austrian crowns if one cannot convert it into gold and if one is not allowed to export one thousand Austrian crowns' worth of goods?

Effect of Export Embargoes

Since there are not enough individuals who are willing to purchase such drafts as an investment or speculation (or, in other words, who would agree to delay exercising their option to buy merchandise in Austria with the equivalent of the draft, because they hope that such merchandise will fall in price, and exchange rise), the Austrian exchange is bound to depreciate from the actual purchasing power value in a degree determined by the severity of the regulations, and the size of the investment and

speculative market for crowns. Such measures prevent the foreign potential buyers from exercising their rights on an equal basis with the individuals in the particular country involved; the price levels cannot be evened up, inasmuch as the tendency for the foreign merchants to take advantage of the greater purchasing power cannot exert itself. Regulations of this nature result in a restriction of imports from, or a curtailment of exports to foreign countries. They are an impediment to the normal adjustment of the exchanges and they leave the market of that particular exchange exposed to all the dangers inherent in the dealings in the common stock of an enterprise which is in a difficult financial condition and whose ultimate power to redeem its promises is valued at a small fraction of the nominal value of the stock. Superficial observers are likely to draw wrong conclusions from the fact that some exchanges register apparently a very great impairment of the purchasing power of certain countries. Some nations might take advantage of such devices to veil their actual productive capacity and restrict their export activities temporarily, while at the same time accepting orders and accumulating stocks for the future.

Effect of Special Export Prices to Foreigners

Similarly a permanent depreciation of exchange is produced by the practice of raising prices on certain or all goods for export, to some multiple of the internal price. Inasmuch as a foreign draft will yield only the equivalent of the purchasing power which it commands, if all the exportable commodities bought for export are priced at ten times the internal price, it is evident that the draft is worth ten times less than if the proceeds of it might be used to buy the same commodities at the internal price. The effect upon international trade of the extra high prices charged foreigners is the same as that of an export tariff.

All these measures—the imposition of export embargoes or the practice of charging higher prices to foreigners—by whatever motive they may have been dictated, retard the ultimate equilibrium of the exchanges and introduce factors of instability into markets which already have to contend with numerous

other uncertain elements. The period of adjustment—for adjustment must ultimately come—is prolonged, and the question is whether the ephemeral advantages to be derived from such restrictions outweigh the disadvantages which are felt for a much more protracted period.

The logical way to meet the effects of extra high prices to foreigners, and export restrictions, such as we have described, would be to eliminate the cause. It has been argued that to abolish them would mean that some countries would be depleted of goods. However, the heavy purchases for foreign account would *per se* raise prices to such an extent that ultimately further exports would be rendered impossible. It must not be forgotten that in the last analysis, these barriers, in the form of embargoes, have been erected to prevent goods from leaving countries which are already indebted, and flowing to those who are anxious to obtain these goods in payment of balances due them. For, after all, depreciated exchanges mean that the foreign importers have been buying more than they can pay for. They are the inevitable outcome of the operation of an economic law. An attempt to counteract it by legislation or any other device, is bound to have detrimental results.

Effect of Reduction of Foreign Credits on U. S. Exports

The practice of charging higher prices to foreigners and the imposition of export embargoes are responsible for a certain share of the real exchange depreciation. The balance (which probably forms the major part) is attributable to the temporary slackening in the extension of short or long term credits, which in many cases acts as a deterrent to the shipment of goods to those markets to which higher prices would normally attract them.

On this score some criticism has been directed against financial institutions in general, based on an alleged lack of co-operation in matters of credit for foreign trade. It should be remembered in this connection that the commercial banks as at present organized are obliged to invest the greater part of their available funds in the most liquid and marketable form. The bankers are anxious to harmonize the protection of the interests of

the depositor, which for them must admittedly be the paramount consideration, with the desire to assist and further that most important branch of our internal economy which, in finding foreign outlets for our surplus production, creates more work and wealth at home. The rapid development of both our export and import trade during the last decade, the rise in prices—involving much more strenuous financial efforts,—and the abnormal credit conditions prevailing abroad—claiming much more extended advances and discount privileges—have all rendered this task more difficult. It is to be hoped that ways and means will be found to satisfy, in an ever greater measure, the legitimate demands for funds to be allocated to foreign trade. Allowance should, however, always be made for the fact that, whereas individuals are at liberty to, and will immobilize their savings for more or less long periods, provided the remuneration is adequate, the principles which have guided cautious bankers at all times in the investment of their deposits (which are only in part actual savings) cannot be infringed upon for any extended time without running counter to the interests of the community as a whole. Our banks may be relied upon to follow a middle course which will satisfy both their duty toward the depositors and their natural predisposition in favor of foreign trade.

Excluding the undervaluation[43] attributable to the trade restrictions mentioned above, the present depreciation of the exchanges cannot be corrected until exports from Europe come forth in sufficient volume or until the debased exchanges again attract American capital so as either to shorten supplies and thereby raise merchandise prices here, or to lower merchandise prices in Europe by increasing her supply of goods. At this time price levels are not raised here or lowered in Europe and exchange rates do not represent equal purchasing power in the respective countries. The pressure which should bring exchange back from real depreciation to the purchasing power value; viz., a movement of capital or goods from the United States to Europe, does not act with sufficient intensity because there is not sufficient capital invested or credit extended for the time being.

([43]) The result of an attempt to establish to what extent the pound sterling, franc, and mark are undervalued, may be found on pages 122-124.

As a practical illustration: Imports to Italy are hampered by the real exchange depreciation against her; on the other hand, the normal corrective—more exports from Italy—is inoperative since she must import certain commodities before she can export. Importations into France are similarly affected, though probably not to the same extent.

Great Britain's Balance of Indebtedness

Great Britain is placed at the same disadvantage as the United States in certain markets of the world. Her exchange in many centers is at a premium just as the dollar, which, to a certain extent, handicaps her in trading with such countries. Actual exchange depreciation, while in force, acts like a protective tariff enacted by an importing country; actual appreciation of exchange resembles, in its effects at least, a penalty inflicted on the commerce of an exporting country. Europe's exchanges in general would probably show still greater depreciation in the United States (and sterling exchange would be correspondingly higher, or what is more likely, Lombard Street[44] would have borrowed less from us), if in addition to the credits opened by us, British banks and manufacturers had not also granted credits to Europe[45] over and above those which we had opened ourselves. To do this, Great Britain borrowed in turn from us on her own guarantee; in other words, although she is now exporting to the United States to almost the same extent that she is importing from us,[46] she has not been able to set aside any surplus to cancel her past indebtedness. She has been exporting to Europe rather than to the United States. British depositors and British investors, because of their closer geographical location, and also, undoubtedly, by reason of their longer association with, and their more intimate knowledge of Continental business and affairs, underwrite the risks which American manufacturers, exporters, investors, and banks do not yet care to assume to the fullest extent; British

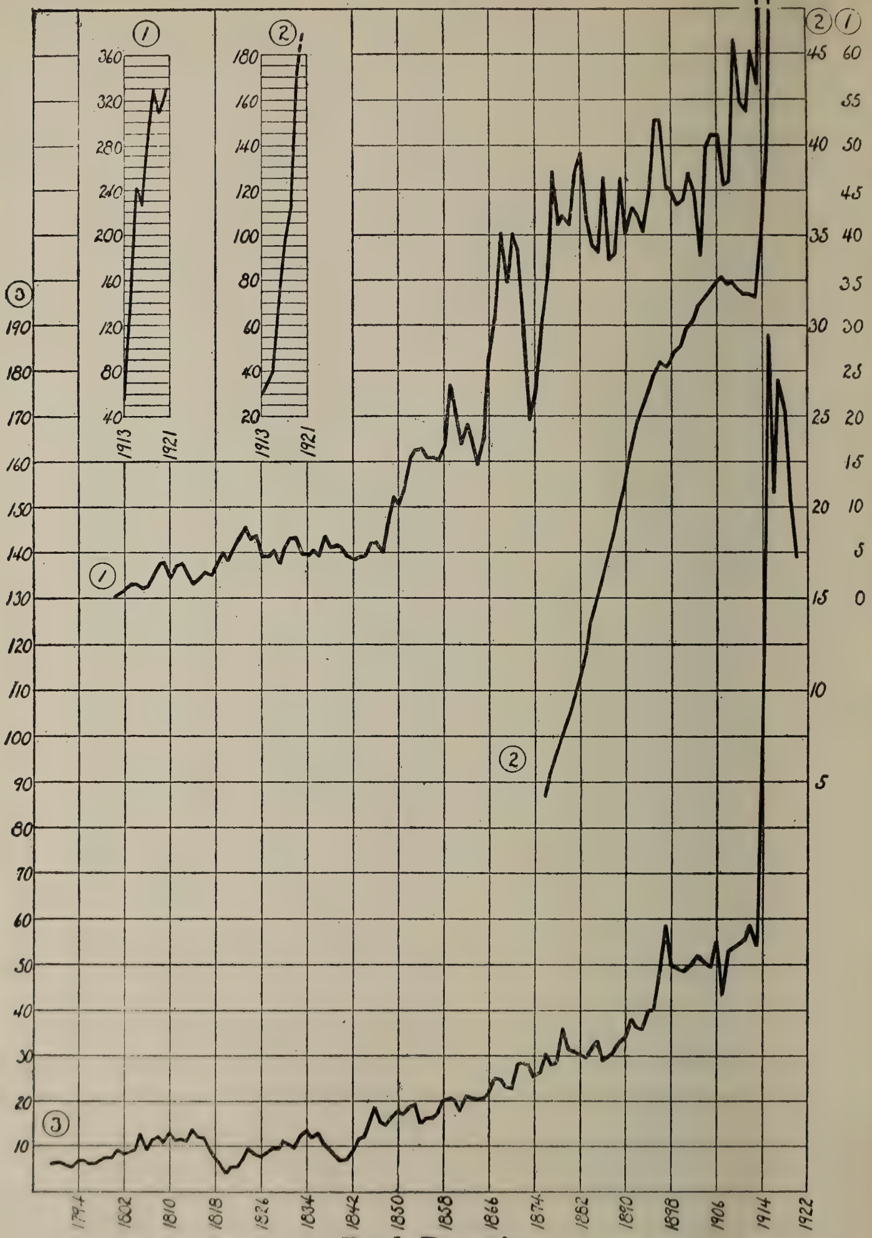
---

([44]) The London center for British finance.

([45]) That is, exported goods to Europe directly, or through others.

([46]) This does not imply that trade has reached its pre-war volume. As a matter of fact, measured in volume of goods, our trade with England is far behind pre-war figures.

No. 9



Bank Deposits

Bank of France: (1) Average annual balance of current accounts (exclusive of treasury deposits) in 10,000,000 francs.

Insert reduced to 1/8 of main scale.

Bank of England: (3) Annual average of total deposits in £1,000,000 up to 1900; 1901 on annual average of quarterly averages of total deposits (exclusive of capital, rest, and post bills).

Insert reduced to 1/8 of main scale.

Reichsbank: (2) Open deposits at the end of every year in 100,000,000 marks.

Dec. 31, 1920—Mks. 22,327,144,000.

Insert reduced to 1/8 of main scale.

trade is, of course, directly benefited—as it has always been in the course of history—by this more aggressive policy.

It is apparent that any nation, to make its foreign trade count in its *annual* international settlement, must export either to markets which are in a position to adjust their debit balances in gold or goods, i. e., where she can buy drafts which will be equivalent to gold, or to countries where she has debts to liquidate.[47] While Great Britain is thus a debtor in relation to the United States, she is a creditor of Europe at the same time. But as far as her balance of payments with our country is concerned, this fact has no bearing for the moment. Normally, with the whole world on the gold standard, Great Britain would use these credits to liquidate her floating debts and interest charges to the United States. Today her debtors are unable to, or do not pay and thus do not help her to meet her adverse balance of payments.[48]

Effect of Trade Disturbances on the Economy of the United States

The reduction of the volume of our exports to any considerable degree (unless more credit is ultimately extended) will diminish the value of the tremendous productive machinery built up in our country since 1914. Stimulated by the war, our domestic production has been expanded in certain lines for Europe's specific needs. This output, thrown back upon the United States, is beyond the present demands of our people, mostly because the production of the rest of our commodities has not been increased at the same ratio. We are desirous of exchanging the goods produced in excess for other merchandise which is of more value to us. We cannot dispose of them or use that particular industrial capacity except by foreign trade. The decline of ex-

([47]) Unfortunately for us, even those countries which are supposed to be able to settle find it advantageous in many instances to delay payments because of the extraordinary premium on the dollar (e. g., South America).

([48]) The excess of Great Britain's imports over her exports during the year 1920 amounted to £378,767,136 over against which she had invisible exports which have been estimated as high as £640,000,000. There was, therefore, in her favor, theoretically at least, a balance amounting to over £200,000,000. However, the invisible exports are to a large extent made up of interest income from the financially weaker Allies which has not been paid.

ports is increasing the available stocks and is contributing to the fall in prices, which has been proceeding since approximately the middle of 1920. Our industries have now begun to reduce their extensive production for foreign markets and to adapt their output, in the main, more closely to the domestic demands. In case credits on a large scale should be granted hereafter, it would have to be considered whether it would be wise to adjust production and consumption once more, with a view of providing for a larger exportation of goods which may or may not be permanent. We are just emerging from a period of deflation. True, the speculative element, encouraged by a certain amount of inflation, had also driven domestic prices up beyond their normal level; however, we must bear in mind that a reduction in the volume of foreign purchases and an accumulation of commodities will at all times mean a loss not only for the exporter, but also for the farmer of the Middle West, the cotton planter of the South, and the nation as a whole.

Index Numbers of Prices

Index numbers of wholesale prices on a comparable basis, average 1901-1910 equals 100.

United States: (4) dotted line gives prices of commodities in terms of gold, 1862-1879.

France: (1)

Great Britain: (2) dotted line gives prices of commodities in terms of gold, 1801-1820.

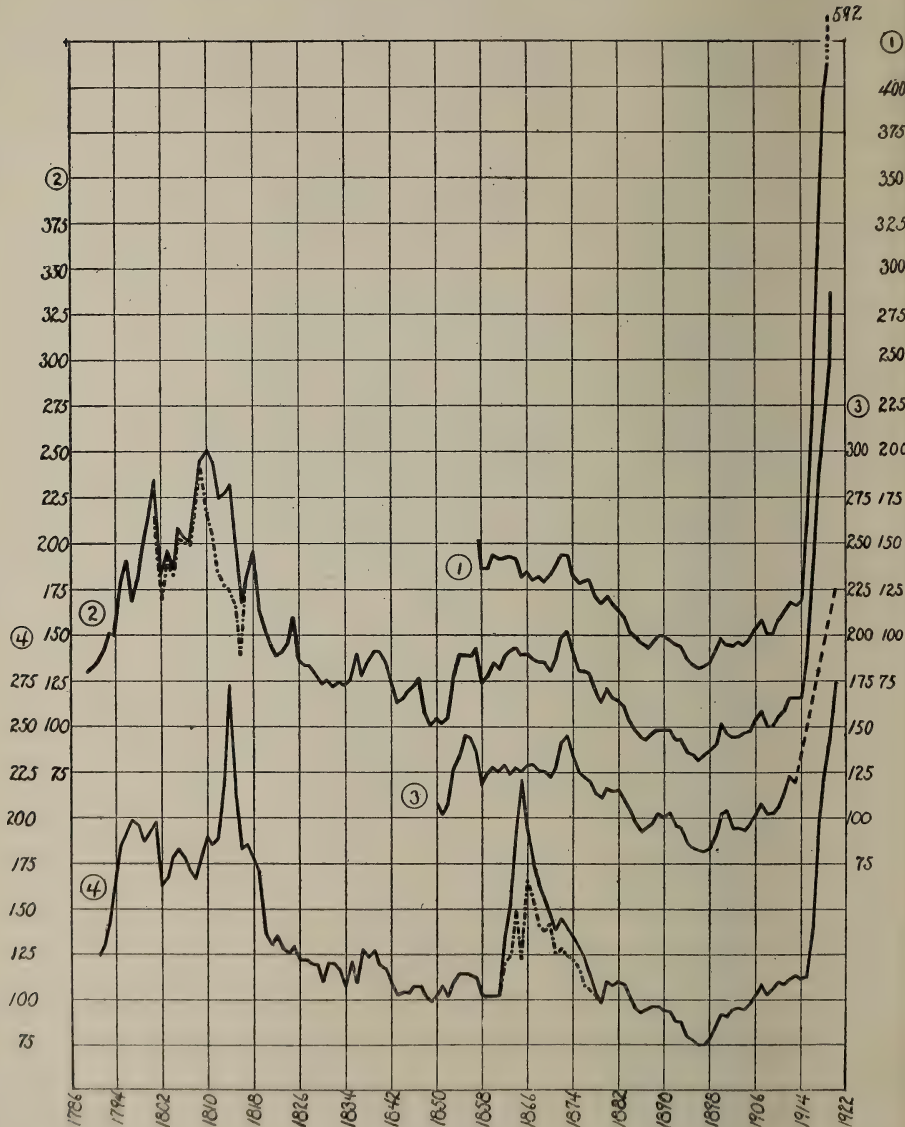
Germany: (3) No figures 1914-1919; 1920 figure=1635.

INDEX NUMBERS OF PRICES

Except for disturbances caused by war or disordered currency conditions, prices in the different countries fluctuate more or less in unison. World prices rose, beginning with the French Revolution and extending through the Napoleonic Wars. Then followed a fall extending to about 1850. From 1850 to 1873 prices rose, and then declined continuously till 1896. From 1896 to the beginning of the great war, there was another general, gradual rise in prices. The rises during the present war, have, except in the case of the United States, been greater than at any time during the history of the past one hundred and thirty years. The Bank of England suspended specie payments in 1797 and did not fully resume until 1821. Currency in the United States was on a paper basis, in certain parts of this country from 1814-17 and all over the United States from 1861-79.

1800	Crisis in England.
1810	Crisis in England.
1812	Outbreak of the war of 1812.
1814	Crisis in the United States.
1815	End of Napoleonic Wars.
1818	Crisis in England.
1825	Crisis in England.
1836	Crisis in England.
1837	World Crisis.
1839	Small Crisis in United States.
1847	Crisis in England.
1865	End of Civil War.
1866	Crisis in England.
1870	Outbreak of Franco-Prussian War.
1873	World Crisis.
1907	World Crisis.
1914	Great War.

No. 10



INDEX NUMBERS OF PRICES

For explanation and comment on this chart see previous page.

V.

Factors which have Lowered the Foreign Exchange Quotations

(c.) SPECULATION.

Some of the exchange fluctuations have been accounted for by the rapid changes in the relative prices of merchandise due to currency disorders. But the paramount cause for the violent oscillations of the exchange rates lies undoubtedly in the extensive speculation. The outstanding credits in the form of bills of exchange, deposits in European banks, open accounts, and finally in European currency (held in countries other than those in which they are legal tender) form a constantly dangerous and incalculable element in the foreign exchange markets. The exportation of currency by European countries has been especially serious. Considerable quantities of such monies, particularly francs, lire, marks, Austrian crowns, and rubles, are being held by the former neutral countries (Switzerland, Holland, Spain, Sweden, Norway, and Denmark). Since the armistice citizens of the former belligerent countries themselves participated in this speculation to quite a considerable extent. Either as a reinsurance against apprehended risks incurred in connection with their business transactions or the administration of their fortunes ("the flight of capital"), or simply as a matter of speculation, they went long or short on foreign currencies. Such operations were, however, often restricted or forbidden by the laws of their country. Quite frequently too, the proceeds of merchandise exported from one of the European countries to another, instead of being repatriated, were invested in such other countries, thus depriving the market of their own exchange of the support which was so necessary.

Incidentally, it should be noted that this speculation is largely the buying of exchange by individuals who are betting on

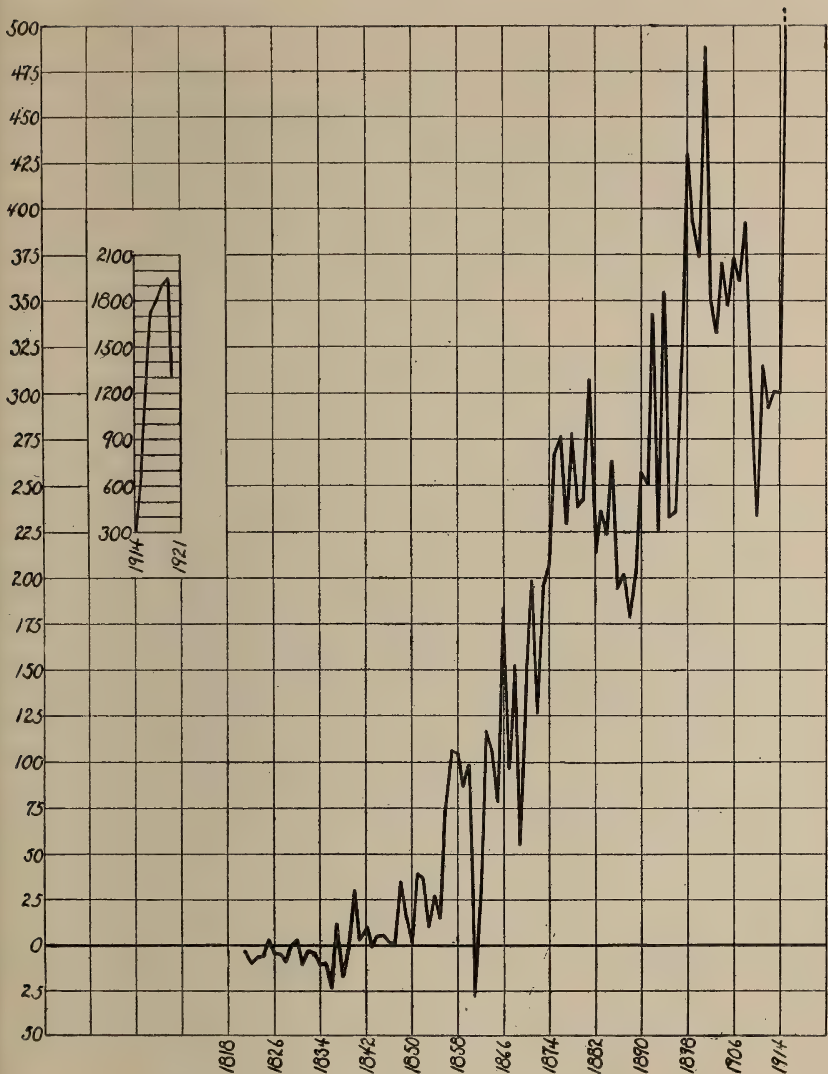
a rise. This buying is often compensated by the selling of exchange on the part of other individuals who are betting on a fall. Therefore, it constitutes merely a swapping of foreign exchange contracts and a shifting of Europe's creditors, but not actually an increase in the total amount of outstanding credits. Thus the debtor countries cannot even gain the slight advantage of more purchasing power, but are merely exposed to the often disastrous exchange fluctuations.[49]

Factors Favoring Speculation

Speculation in exchange is favored by the fact (1) that the purchasing power of a foreign bill of exchange cannot be defined with any degree of exactness, except perhaps retrospectively; (2) that these indefinite purchasing power values fluctuate with increasing inflation or deflation; (3) that the credit conditions in some European countries are either uncertain or precarious; (4) that the political situation abroad at best is complex and that the social unrest existing in many countries is fraught with imponderable developments; moreover, that contemplated changes in commercial treaties and the tariff policies pursued may alter considerably both the balances of trade and indebtedness; and, finally, (5) that there is a large volume of unfunded, unsecured debt in the form of bills of exchange, bank deposits, currency, and long term internal bonds and stock,

([49]) Just as interference with the free movement of goods may cause an undervaluation of exchange, restrictions upon the free movement of and dealing in foreign bills of exchange or currency may bring it about that the same currency is quoted at widely varying prices in different markets on the same day. For instance, on December 30, 1920, the quotation of Austrian crowns in Zurich, Switzerland, was Swiss fcs. 1.55 for 100 Austrian crowns and in Berlin marks 16.87½, while in Vienna Swiss fcs. were quoted 0.98 and marks 10.90½, on the basis of 100 Austrian crowns. During the war, some exchanges were artificially stabilized by the respective foreign governments, who utilized the advances made by our government to buy up all bills offered below a certain fixed ("pegged") rate (e. g., \$4.76 7/16 for the pound). Lires have been under the control of the National Exchange Institute which, with the assistance of the Federal Reserve Board, kept the rate fixed at 6.35 lires per dollar. Furthermore, our own Federal Reserve Board by well-conceived arrangements with the Argentine, Spanish, and Swiss governments, solved practically and advantageously for the U. S. Treasury the delicate exchange problems which arose as a consequence of our heavy purchases of food-stuffs and war materials in these various countries to meet the urgent needs of our Expeditionary Forces.

No. 11



United States Trade with the United Kingdom

BALANCE (net) of merchandise imports and exports between the United States and Great Britain, annually in $1,000,000.

Insert reduced to 1/12 of main scale.

For further comment on this chart see page 114.

which may be increased at will or dumped on the exchange markets, without notice, at any time.

There are drawbacks to a rising as well as a falling exchange. Many European holders of stocks of imported commodities have incurred heavy losses whenever their currency appreciated sharply in the neighboring or foreign markets. Some of the neutral countries—Spain being the most recent sufferer—have been indirectly hit through the world-wide fall in staples in which they had invested part of their war profits or which they had bought on credit.

In this connection it should also be noted, that, all other conditions being equal, a general fall in merchandise prices of 30%, for example, will to that extent change the balances of trade of the various countries and thus is likely also, by modifying the balances of indebtedness, to raise the exchanges of the importing and lower the exchanges of the exporting countries.

Speculation during the decline of the exchanges accentuated the tendency toward "undervaluation". Similarly, from the point of view of future developments, it is not improbable that the prospect of European recovery, brought about by a final and workable settlement of European differences, will call forth another great volume of speculation to take advantage of the "undervaluation" now registered by certain of the European exchanges. In this event, speculation may again, but in the opposite direction, amplify the upward swing and create for a certain period of time an "overvaluation". There will, however, be two large offsetting factors: Europe's floating debts—unless funded in the meantime—will gradually come into the exchange markets, and secondly "overvaluation" will stimulate additional exports to Europe.

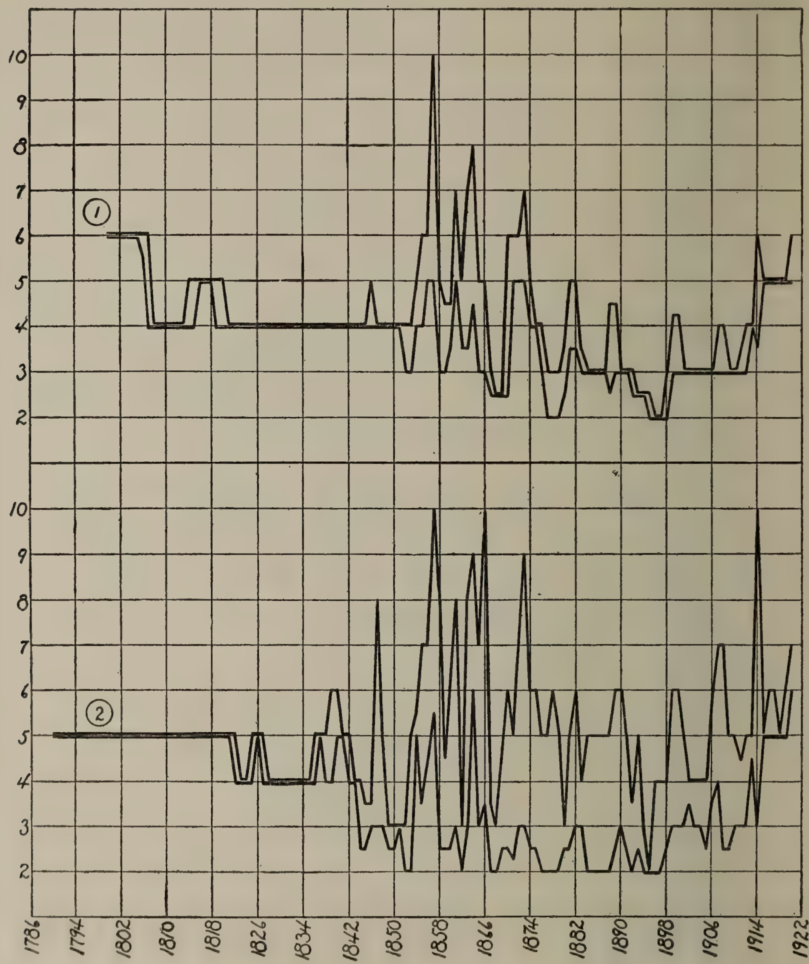
Discount Rate of the Bank of France

1857 World Crisis.
1861 Outbreak of Civil War.
1864 Austro-Prussian War against Denmark.
1866 Outbreak of Austro-Prussian War.
1870 Outbreak of Franco-Prussian War.
1873 World Crisis.
1882 Financial difficulties in France.
1889 Crisis in France.
1898-1900 Boer War.
1901-2 Financial stringency in Germany.
1907 Crisis in United States, Great Britain and Germany.
1914 Crisis—Outbreak of Great War.

Discount Rate of the Bank of England

1825-6 Crisis in England
1836-7 Crisis in England
1839 Crisis in England.
1847 Crisis in England.
1852 Plethora of money.
1857 World Crisis.
1858 Depression after crisis of 1857.
1863 Small Crisis in England.
1866 Crisis in England.
1868 Depression after crisis of 1866.
1870 Outbreak of Franco-Prussian War.
1873 World Crisis.
1878 Crisis in England.
1881 Depression.
1882 Trouble with Egypt, Turkey, and South Africa.
1890 Crisis in England.
1901-2 Financial stringency in Germany.
1893 Crisis in United States and England.
1898-1900 Boer War.
1901-2 Financial stringency in Germany.
1907 Crisis in United States, Great Britain and Germany.
1914 Crisis—Outbreak of Great War.

No. 12



Loan and Discount Rates

(1) Annual high and low rate (%) of discount charged by the Bank of France.

(2) Annual high and low rate (%) of discount charged by the Bank of England.

For explanation and comment on this chart see previous page.

VI.

Factors which will Stabilize or Raise the Foreign Exchange Quotations

(a.) CREDIT.

> "Assistance given at the present time to the distressed countries of Europe would secure commercial and political ties of immense value in the future, and the inability to give it would mean a great opportunity lost."[50]

To alleviate the pressure which has weighed upon the foreign exchanges ever since the outbreak of the war and—after having arrested their decline—to arrive again at a gradual appreciation of their levels, there is only one effective way: Europe must export sufficiently to pay for her imports and, in addition, to liquidate gradually her present debts.[51] To this end foreign investors must be willing to assume the present unfunded debt and become Europe's creditors on a long term basis, while at the same time they extend additional further loans as required by Europe in order to raise its present production. It is, therefore, necessary to examine now in some detail the present funded and unfunded indebtedness of Europe, with continued special reference to the United States.

Credit Funded and Unfunded 1914-1920

During the war, Europe was able to meet her adverse balance on merchandise account in various ways. She sold back to us American and other foreign securities, especially South American and Far Eastern bonds, held by her. The foreign holdings of American securities have decreased since 1914 from about six billion to a figure which has been variously estimated as ranging between one and two billion dollars. Her own government and

(50) Mr. Frederick C. Goodenough (Chairman of Barclays Bank, Ltd.,) in an address delivered to the Parliamentary Commercial Committee of the House of Commons on June 9, 1920.

(51) Unfunded=floating debt contracted for a short time.

private loans[52] were floated in our market before the entry of the United States into the war and also after credits from our government had ceased. Private American capital placed abroad today in funded obligations amounts to over three billion dollars. During and after the hostilities, the United States government made advances to the allied nations, and it now holds about ten billion dollars of such foreign bonds and long term notes. All this, however, was insufficient to meet the excess of imports from the United States, and the deficit was made up in unfunded loans. European buyers did not pay cash for all of their imports from the United States, but borrowed the necessary amounts in open accounts with American, and to some extent British, producers, manufacturers, and banks. The War Finance Corporation and later the companies formed under the Edge Act facilitated considerably the extension of these credits. Furthermore, Europe received indirectly advances from all foreigners who opened deposit accounts in European banks, or from those who bought bills of exchange or currency for either investment or speculation. Now, however, although Europe is still in need of goods, this unfunded credit has reached such large proportions that for the present it is not being extended further to any considerable degree.

Present Attitude respecting Foreign Short Term Credits

For this there are two reasons: First, those who bought exchange for investment or speculation were unwilling, and later, with the general fall in prices of merchandise, in some instances, unable to increase their commitments; second, the burden of the credit extended by manufacturers, exporters, investors, and speculators in currency or exchange was partly borne by the banks. Those producers and exporters who have tied up part of their working capital in open-account advances to foreign importers have been obliged to apply for financial accommodation which otherwise they would not have needed. These loans have now been restricted and, in addition, the banks have in many cases reduced the outstanding credits on their own account.

(52) We shall designate by private loans, all loans issued by other entities than governments or not accompanied by government guarantees.

The inflation and the consequent rise in prices in our country in the year and a half preceding approximately July 1, 1920 is traceable to a certain extent to the unfunded debt of Europe. The burden of paying for Europe's excess imports has been borne not alone by the manufacturers, the exporters, the banks, the investors, and the speculators in foreign securities, currencies, and exchange, but also, in a limited measure, by the whole nation in the form of the higher cost of living.

It has been explained why the extension of short term or unfunded credit to Europe has been reduced; the question remains as to why further long term funded credit is not forthcoming in sufficient amounts at this moment.

Foreign Funded Obligations held by the United States

For this purpose it is necessary to analyze the probable make-up of our international balance sheet during the next few years. American capital invested abroad today in foreign obligations, the greater part of which is funded, amounts to $17,000,000,000, over against which there are held abroad about one to two billion dollars of American securities, so that the net capital invested abroad is about $15,000,000,000. The interest on this sum—about $800,000,000—if fully and regularly paid, exceeds largely the annual invisible debits, the two most significant items of which were, according to recent estimates, in 1919, $300,000,000[53] for immigrants' remittances and $50,000,000 for tourists' expenditures. The latter item may be expected to reach again much higher figures during the next few years. Freight charges have passed to the credit side but are not very important as yet. Banking and insurance charges are believed to balance approximately.[54] Thus far, then, there would be a strong balance in our favor—about $400,000,000—which would have to be offset by an excess over exports of imports of merchandise and/or gold into the United States.[55] However, by agreement between the United States Treasury and the Allies, inter-

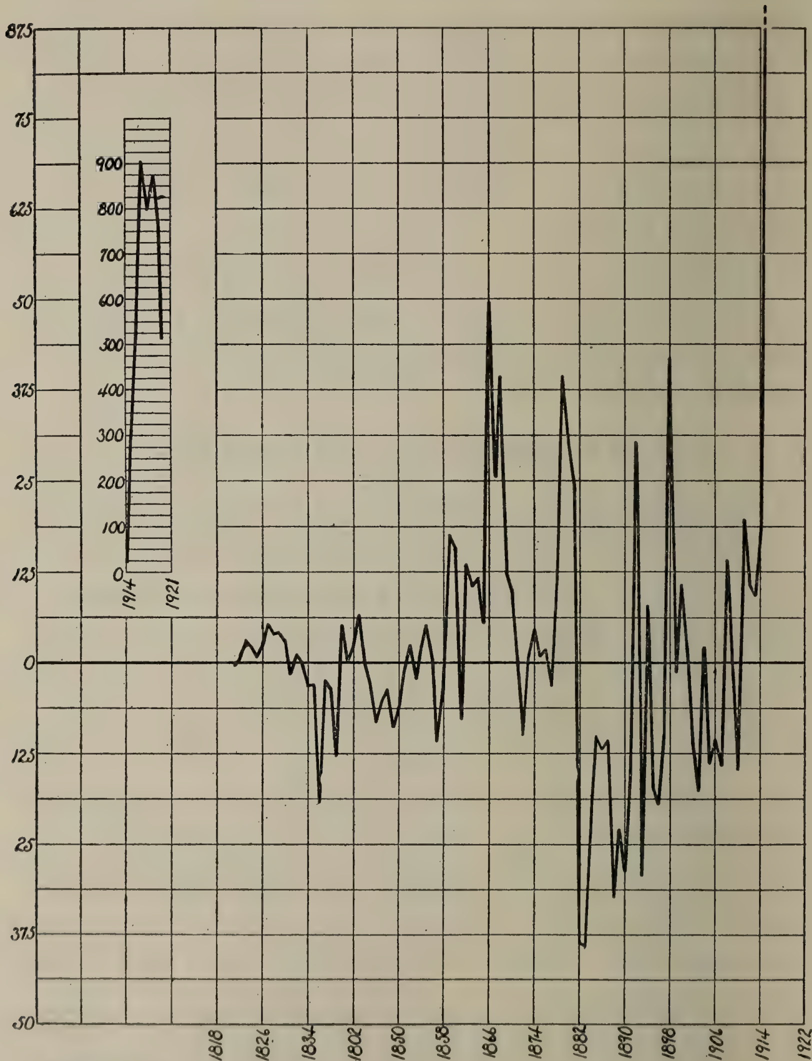
---

([53]) We believe this figure to be too low rather than too high; all these figures are, of course, approximate.

([54]) Chase Economic Bulletin of Oct., 1920. (Dr. B. M. Anderson, Jr.)

([55]) It should be remembered in this connection that in 1920 our merchandise exports aggregated $8,228,759,000, and our imports $5,279,398,000.

No. 13



United States Trade with France

BALANCE (net) of merchandise imports and exports between the United States and France annually in $1,000,000.

Insert reduced to 1/16 of main scale.

For further comment on this chart see page 114.

est payment on the debt held by the United States government (amounting to about $10,000,000,000) has been suspended until 1923. Thus, our country is at present a creditor for practically only about $5,000,000,000, instead of $15,000,000,000, which sum after 1923 with accrued interest will aggregate about seventeen billion dollars involving annual interest payments of about $900,000,000.

Until 1923, therefore, barring any possible change in the amount of the funded or unfunded debt, and not taking into account for the moment the balance which may be due us if our exports continue to exceed our imports, the payment by our foreign debtors of the interest owing us on account of indebtedness ($250,000,000) is more than offset by the amounts due them on account of tourists' expenditures, immigrants' remittances, etc. (over $350,000,000). From the point of view of the future course of the foreign exchanges, we may conclude that until 1923 we can almost disregard as operating factors the various items which we have quoted and that the changes in foreign indebtedness and foreign trade will be the principal elements upon which we shall have to concentrate our attention.

Foreign Unfunded Obligations held by the United States

Outside of the annual net balance of indebtedness of $400,000,000 or more, which Europe, after 1923, will have to cover, she must be prepared to meet, at some time or other, her floating indebtedness in the form of bank deposits, foreign currency, and exchange which for the United States alone has been estimated to aggregate $3,600,000,000. A considerable part of this sum is made up of speculative holdings. In addition, a certain part of the *funded* private debt of Europe held here or in other countries was bought for speculation rather than investment. All these holdings, unless funded, may be expected to appear on the exchange markets at some time, and notably when the speculations show a substantial profit—or loss.

The unfunded credits, open accounts, and bills due by foreign importers, not only in Europe, but also in Central and South America and the Far East,[56] will gradually fall due and

([56]) It should be noted that the fall in prices and the rise of dollar exchange in foreign countries have left many exporters with stocks of goods or with balances on their hands in foreign countries, held either on account

must be covered unless further extension of the maturity dates should be agreed to.

Since Europe cannot without inconvenience decrease her imports and cannot increase her exports in the near future without foreign assistance to any considerable extent, it appears that further credits must be extended in some form or other, not only in order to finance the future exports to Europe, but also to consolidate the floating debt, which, as a sword of Damocles, overhangs the foreign exchange markets.

The question of granting these further credits must be examined both from the American and the European side.

Present Attitude respecting further Funded Loans

It is admitted that, in the future, rather than from the banking assets or the active working capital of business houses, needed credits must come in a larger proportion from the investor. This presupposes: (1) That there is on hand in this country enough liquid income to absorb in adequate amounts the long term bonds offered by prospective European buyers of the commodities and goods held for sale by the American farmers, planters, manufacturers, and exporters; (2) that our people will be able and willing to save sufficiently in the future in the interest of that important part of the community which directly or indirectly thrives on foreign trade and, for that matter, for the ultimate benefit of the whole nation whose future prosperity may largely depend on it.[57] The amount of surplus wealth has been considerably decreased by the recent fall in prices. The farmers alone, despite record crops, are said to have experienced a loss in purchasing power of six to eight billion dollars. It has been asserted that additional foreign reconstruction loans could not be floated because there is not sufficient idle surplus capital. Yet the losses incurred by the recent drop

---

of cancelled orders or, as in the case of Australasia and South Africa, because during some time it was more difficult to sell drafts against shipments to these destinations or to secure at reasonable terms cover in sterling or dollar exchange.

(57) The probable carry-over of raw cotton in the U. S. at the end of the present crop year has been estimated to amount to 7,000,000 bales, more than one-half of last year's crop.

in prices appear to exceed the amount which would have been necessary to cover the whole of Europe's unfunded indebtedness. It has been explained above why short term credit is no longer forthcoming to a sufficient extent to bridge the gap between present supply and future production. Plans for enlisting the desirable co-operation of the investor on a larger scale are being put forth daily. Assuming that the annual savings available in the United States are adequate to cover not only our still important domestic requirements, but also legitimate foreign needs, there remain other weighty factors which have to be considered.

Prerequisites to the Extension of further Credits or Loans

In approaching the question of financial assistance to Europe, distinction must be made between loans to private individuals, firms, or corporations, and loans to nations or to government agencies. Where a private individual is the borrower, an investigation is made of his integrity, his assets and liabilities, his line of business or product, and the actual or prospective market thereof. One endeavors to measure the individual's productive ability and to determine whether he is entitled to the amount of credit sought, and whether he is able to meet the interest charges thereon, in the first place, and repay the capital ultimately.

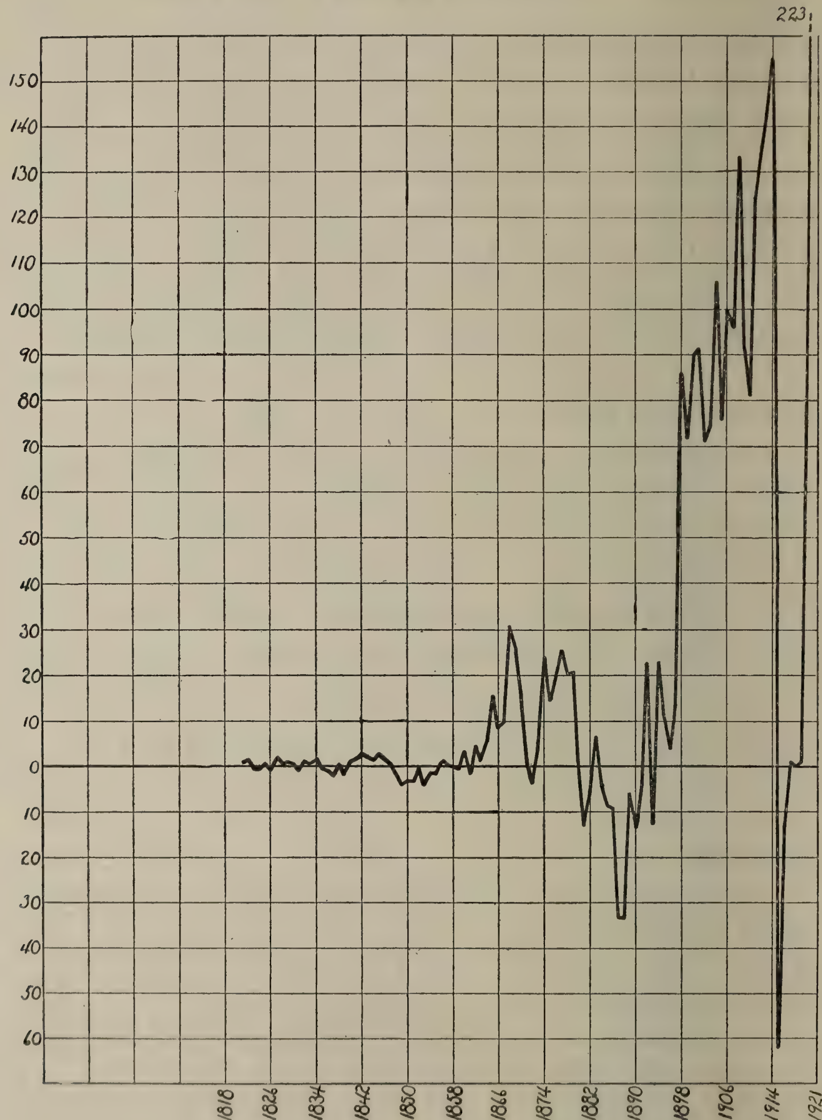
Production

The grant of a loan to a foreign government is dependent chiefly on three elements: (1) the capacity of the nation to produce; (2) its ability to save over and above consumption; and, (3) the status of social solidarity enabling the imposition of the required taxes. A country's capacity to produce depends on its area and geographical location, on its population, and finally on the amount and kind of its national wealth and its technique of production.

Saving

It is considerably more difficult to establish a nation's capacity to economize. The extent of the growth of savings, not in terms

No. 14



United States Trade with Germany

BALANCE of merchandise imports and exports between the United States and Germany annually in $1,000,000.

For further comment on this chart see page 115.

of money, but in terms of goods—which failing gold or services are the only means of paying off foreign debts—is a very elusive quantity. It is generally computed by taking the figure showing the annual national income, from which is subtracted the consumption of the nation during the year. From the remainder, a sum is set aside to cover necessary repairs and improvements on the domestic productive machinery and all capital charges on the already existing foreign debt. The balance in gold or goods may be estimated to be the sum available for meeting further foreign obligations.

Taxation

Taxation power is even more difficult to establish. The lender is interested less in the temporary financial situation of a nation, than in the ability to produce and segregate a margin. Nations vary in the taxability of property. The nature of property differs, and is, therefore, not equally susceptible of being reached by taxation. The psychology and the civic education of the people is not the same, and finally, political conditions allow certain nations to tax to the limits of physical possibility, while others dare not tax so severely for fear of an overthrow of the government, and social revolution.

Yield

Still assuming political stability, the question of yield is complicated by the monetary situation in the creditor countries, the most prominent of which is the United States. Even at high rates, there is always a great demand for capital from our own industry. Besides being handicapped because many of our capitalists still prefer domestic securities, the European individuals or governments bidding for capital have to compete not only with American and other non-European borrowers, but also with our own federal government, states, municipalities, public service, railroad, and industrial corporations; the result is higher interest, and syndicate charges. It is, therefore, doubly necessary for Europe to use credit as sparingly as possible.

Application of Loans

The needs of the borrowers are carefully examined not only as to total volume but also as to the intended use of the proceeds. Funds are granted to applicants only after careful scrutiny of the eventual purpose of the loan. It is believed in some quarters that Europe's past borrowings have not been so fruitful in actual economic results as they might have been. Some of the credit that has been granted, instead of being used to buy raw materials with which to produce exportable goods, appears to have been employed to buy luxuries, or to have been merely transferred into the borrowing country, or to other creditors. Undiscriminating credit extended from one source is a disadvantage to all other lenders, if it is not put to the wisest use for the benefit of all.

Exchange and the Lender

From the special viewpoint of the influence of such credits on the foreign exchanges, some technical points are worthy of notice. Assuming that the political situation is clear and stable, that international contracts are respected and promise to be undisturbed, lenders will not, and cannot be expected to give up their savings if the borrower, although he lives up to the letter of his contract, pays interest charges and principal in monies which may have less purchasing power to an incalculable extent than the funds originally loaned. The investors as a whole cannot be expected to bear the exchange risk today, although some individuals may be willing and anxious to do so. Formerly the risk of exchange was borne by the lender if desired; however, the recent experiences of holders of foreign securities in this respect have not been encouraging.

The capitalist, who in the past invested in obligations payable in European currencies, receives today his interest in depreciated paper money. His annual return is diminished more or less considerably, and in case of reimbursement by the borrower, or in case of sale at home or abroad, he suffers a heavy loss.

Exchange and the Borrower

The financial position of the borrower (nation or individual) is technically unchanged, although practically the inflation that

has taken place in the meantime and the increased fiscal capacity (as calculated in paper money), render it easier to pay the interest or amortize the capital in his depreciated currency. If the loan has been contracted in foreign currency, the situation of the borrower is different. He will have to pay a higher sum in case his own currency at the time of maturity or repurchase of the loan or the payment of the coupons is quoted in the international exchange markets lower than at the date of issue or sale. If the borrower's currency has declined in the foreign markets, it will be advantageous for him to reimburse, by anticipation, if legally he can, the old loans contracted in his own currency at a time when it was at or above par abroad. In this connection it has been affirmed that the more foreign countries increase their foreign loans, the more they are tempted to inflate their money at home. If a loan payable in Belgian francs, contracted when Belgian francs were worth eight francs to the dollar, is paid off at a time when the value of Belgian francs has fallen to fifteen francs per dollar, this would appear to be an advisable and profitable transaction. Here would be one advantage of inflation.

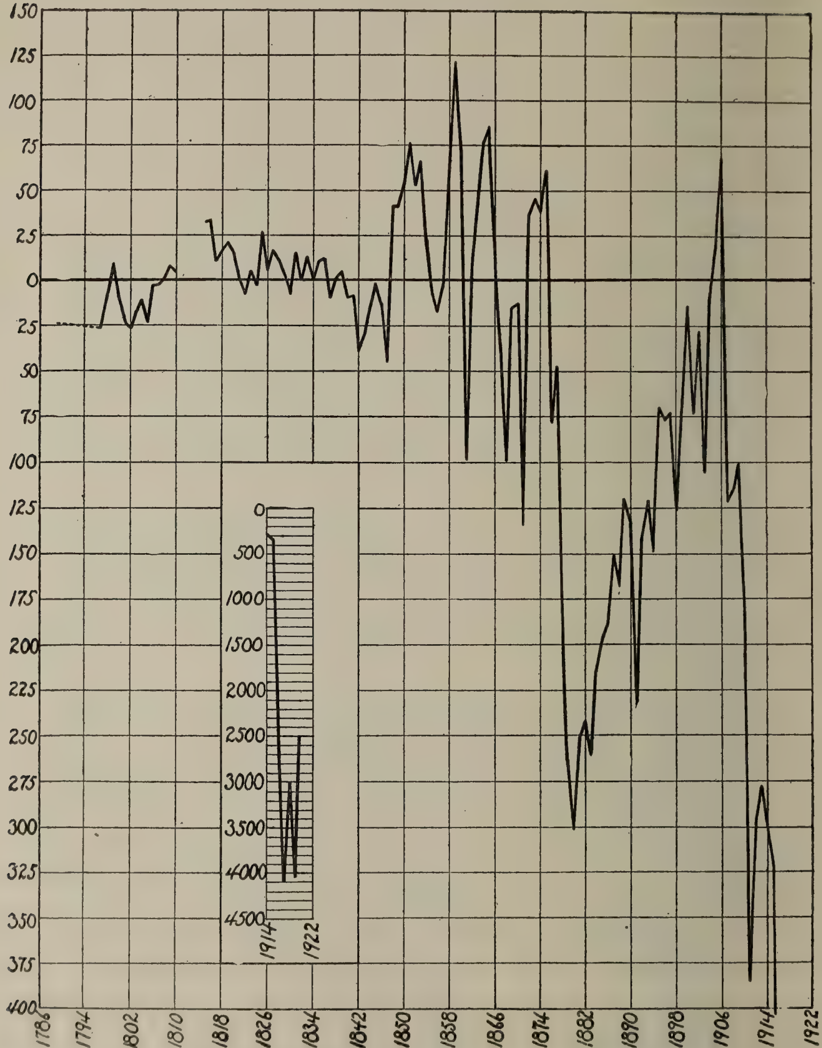
The alternative to having the purchaser of the bonds bear the exchange risk, is to issue the loan in dollars; however, the borrower too, may under prevailing conditions, hesitate to assume the exchange risk. If, for the remittance abroad of capital and interest, the dollar costs the borrower more to acquire than it was worth at the time the loan was contracted, the interest and amortization charges are proportionately increased. On the other hand, should the premium on the dollar or sterling drop, these same charges will be proportionately less burdensome.

Secured Loans to Private Borrowers

More important than the return, the exchange risk, and the application of the proceeds of the credits or loans, is the question of the security behind the obligation.

In the case of short term credits granted to private borrowers, both bankers and exporters often cover themselves by retaining a lien on the goods exported even to their ultimate sale

No. 15



The Merchandise Balance of France

BALANCE (net) of imports and exports of merchandise (special trade) between France and the rest of the world annually in $1,000,000.

Rate of conversion 19.3 cents per franc.

Insert reduced to 1/20 of main scale.

For the period of 1789-1797, figures for the years 1789 and 1792 only available; no figures for the years 1811-1814, inclusive.

For further comment on this chart see page 115.

after conversion ("finishing credits"). In cases where the funds are actually deposited with banks or where the credits are surrounded by bank or government guarantees, such collateral is often dispensed with. The question is of much deeper significance for the investor in long term loans. Should not the European private borrower besides showing ability to pay the interest charges and part of the principal, furnish also tangible security in the form of a mortgage on unencumbered property (mines, factories, etc.)? Will any such security tendered to the American investors protect them efficaciously against the possibilities of the failure on the part of the borrowers (large industrial corporations, railroad companies, etc.), to meet their obligations, whether they be due to internal business difficulties, to inflation by their nations, to adverse movements in the exchanges, or to political events?

Secured Loans to Governments

In the case of nations, the security may be of various kinds. The borrower may pledge a form of revenue to the creditor; the yield of certain taxes or customs may be handed over to, or administered by the representatives of the foreign investors. Nations may also offer as security, forests, railroads, power plants, or even territory (free of prior liens on property held by their own citizens whom they would indemnify). The economic section at the first Assembly of the League of Nations in December 1920, as a first constructive move in this direction has recommended the establishment of an international commission which would act as trustee for assets so pledged by credit-seeking powers on behalf of their citizens.

If satisfactory security is available, it is questionable on the one hand whether the European governments or individual borrowers are willing to furnish such special collateral. The selling of European securities in foreign countries has brought with it an increasing control over local European industries by aliens, which has often been resented because it has hurt old vested interests.

On the other hand, even though the physical security may be considered ample, the American capitalist may require more definite assurances that the government of the United States (or some international agency if it is able to do so), is prepared to enforce, if necessary, the delivery of the security or its proceeds in case of default by any of the contracting parties.

International Situation the Overwhelming Factor

In some cases it may not even be so much the question of finding the physical basis of the security; the collateral after all is intended only to protect against loss in case the borrower cannot or will not live up to his contract, which is expected to be the exceptional case. The large and all-important question is, whether the political and economic conditions abroad warrant encouragement of foreign investments at this time. Is the whole European policy such as to promote readjustment? Is there a sincere endeavor to return to sound economic principles? Some blame the present imbroglio on the redistribution of territory and movable wealth without regard to the economic effect of isolating old productive centers from their connections; others criticize the imposition of embargoes, regulations, immigration bans; the continuation of the spirit of animosity and distrust; the extravagant government expenditures, and the still undecided reparation problem. Will not all these matters together—if they are not remedied at the outset—either delay or prevent the various European countries from reaching their highest productive capacity even with ample outside support?

Europe's Obligations and the Future of our Foreign Trade

In the cost of many manufactured goods the price of the raw material is the smaller, the compensation of labor, the overhead and all other charges, the larger item. The proceeds of a loan, in the last analysis, are turned over to the borrower in the form of raw materials furnished either by the lender or some other country. Eventually these loans are paid off with raw materials produced and articles manufactured in the borrower's

country. The latter are invoiced to the creditor and other buyers at the original cost of the raw material, increased by the wages of labor, overhead charges, interest on the loan, taxes, export duties, sinking fund, and a profit. By extending such loans a creditor country merely provides its debtor with work and the means of living for part of its citizens, and in so doing, indirectly, to a certain extent, with the means of paying interest on, and gradually redeeming its indebtedness to its creditors.

Particular stress should be laid on the fact that, provided the debtor country can sell its manufactured products to the creditor or some other solvent buyer, the selling price of the manufactured product has, broadly speaking, to be raised by the amount of the interest and the sinking fund.

In ordinary mercantile transactions, the seller on cif (cost, insurance, freight) terms, if he does not prepay the freight, often deducts it from the invoice rendered to the buyer and leaves it to the latter to settle the freight on arrival of the merchandise. Similarly, for purposes of illustration, we might imagine that the debtor invoice the product manufactured, less the amount of interest and the amortization charges by reason of the capital owed. Viewing the situation from this angle, the creditor would, after all, pay to himself, through the proportionate increase in price of the manufactured product, the interest and capital charges due him by the debtor.[58] This means practically that if the creditor, at the outset, chooses to cancel the original debt and interest and to pay for the manufactured product at a price which would not include these same interest and capital charges, the real net price paid by the creditor and obtained by the debtor for the manufactured product would be unchanged. The paramount question arises, whether for the internal economy of the creditor country and for the protection of its home industries, it is better to pay the increased price (including the interest on previous debts) or to cancel the original debt officially,[59] without making any new loans of raw materials and without consequently being obliged, in order to recover the amount of the

(58) This, of course, is not to be taken literally. The individual holder of foreign securities pays himself his own interest only in so far as he buys goods manufactured with the proceeds of bonds held by him.

(59) Assuming that such a course is acceptable to the borrower.

old and new loans, to absorb immense quantities of manufactured foreign articles.

On the other hand, if the creditor country, for the protection of its industries, erects a tariff wall to limit the entry of foreign goods, will it, nevertheless, be able to collect ultimately its outstanding loans? If it does not impose or raise import duties, will it be able to weather the flooding of its markets with foreign articles? In spite of the interest charges, the heavy taxes, and the high prices paid for the raw material by the foreign manufacturers, the selling price of such foreign products may be below the cost price of the identical domestic product at home, due not only to the depreciated exchanges, but also due to the lower wages and the lower standard of living abroad. Furthermore, the cost price of the domestic product may be relatively higher (notwithstanding the perhaps more efficient technical methods and higher individual output), because of the higher standard of living in the creditor country.[60]

Considered in this light, the interest charges added to the price of the products manufactured abroad offset to a certain extent this disadvantage. If former loans are not cancelled and interest charges have to be calculated by the debtor as one of the important items of the balance of his foreign indebtedness, this factor will allow the creditor countries to compete in the disposal of their own products on more equal terms with their foreign debtors in the other markets of the world.

(60) The following table shows the average daily output, and wage of a coal miner in the various countries:

	U. S.	*France.*	*Spain.*	*Germany.*
1913 Output	4200 lbs.	1518 lbs.	1188 lbs.	2134 lbs.
1919 Output	4500 lbs.	968 lbs.	680 lbs.	1254 lbs.
Increase	7%			
Decrease		36.2%	42.7%	41.2%
1913 Wage..	$2.72	6 Fcs.—$1.16	3.80 Pts.—$0.73	5.50 Mks.—$1.30
1919 Wage..	$4.50	15 Fcs.—$2.89	10.70 Pts.—$2.06	30.00 Mks.—$7.14
Increase	165%	249%	282%	549%

The increase in wages is offset to a greater or lesser extent by the higher cost of living which, of course, has risen in different proportions in the different countries. (U. S. rise in prices 114%; France 258%).

Loan and Discount Rates

United States: Below.

Annual average New York rates.

——— 60 days rates (%) till 1859; prime two-name 60 days rates 1860-1906; prime two-name 60-90 days rates 1907-

-------- Call rates (%) till 1874; call rates at the Stock Exchange 1875.

Germany: Above.

——— Annual average of the rate of discount (%) of the Reichsbank.

-------- Annual average of the market rate (%) of discount in Berlin.

No rates 1915-1919.

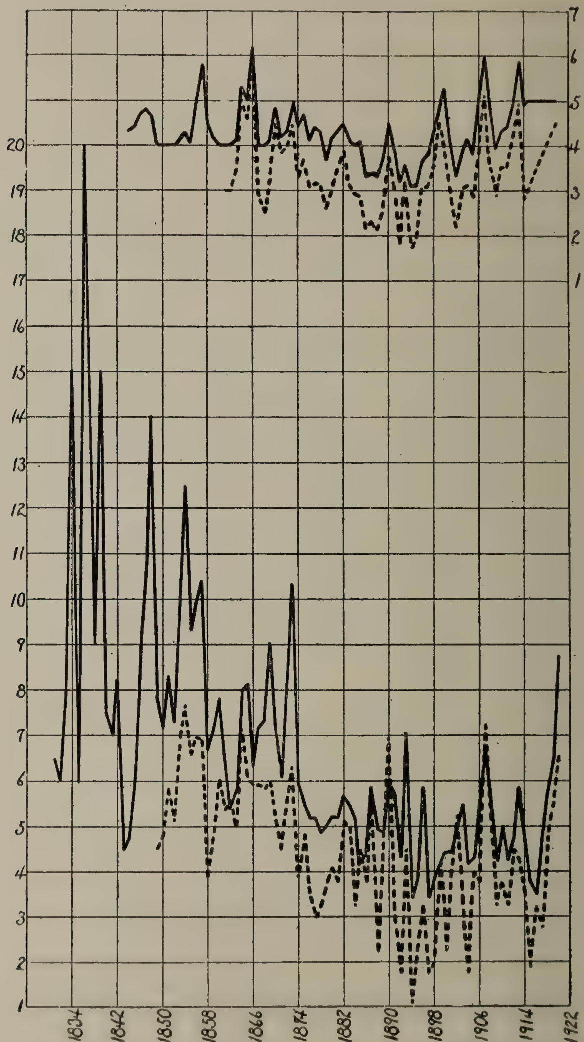
UNITED STATES INTEREST RATES

1834 Stringency in money market on account of government withdrawal of deposits.
1836 Stringency in money market in connection with closing of the Second Bank of the United States.
1837 World Crisis.
1839 Crisis in the United States.
1848 War with Mexico.
1857 World Crisis.
1860 Crisis on Outbreak of Civil War.
1869 Stringency in connection with speculation in gold.
1873 World Crisis.
1887 Some Bank Failures in the United States.
1890 Crisis.
1893 Crisis in Great Britain and United States.
1903 Crisis in United States.
1907 Crisis in United States.
1913 Balkan Wars.

GERMAN INTEREST RATES

1847-8 Political Disturbances.
1857 World Crisis.
1864 Austro-Prussian War against Denmark.
1866 Crisis in England and Austro-Prussian War.
1870 Outbreak of Franco-Prussian War.
1873 Crisis.
1890 Crisis in England.
1898-1900 Boer War.
1901-2 Financial stringency in Germany.
1906 Crisis in Germany.
1907 World Crisis.
1913 Balkan Wars.

No. 16



LOAN AND DISCOUNT RATES

For explanation and comment on this chart see previous page.

VI.

Factors which will Stabilize or Raise the Foreign Exchange Quotations

(b) DEFLATION.

Assuming that purchases in Europe could be and were increased, that present trade restrictions were removed, and that credit to European countries could and would be extended along the lines discussed in the previous chapter, such measures would aid only temporarily in correcting any actual depreciation which may exist beyond the present purchasing power of the exchanges. On the basis of our analysis, it must be evident that only if (as a result of imports from, or extension of credits to Europe) the merchandise equivalent of European currencies was permanently enhanced by increased production abroad, would the "gold discount" be actually reduced. As a matter of fact, in the present economic state of the world, such imports or credits cannot be effected on a scale large enough to raise the real value of debased currencies lastingly unless they are spread over a period of years. Furthermore, the immediate productive capacity of the debtor countries is limited. It would appear, and it has already been amply emphasized by all competent students of these questions, that the principal step to be taken toward improving the foreign exchange situation, is to put a stop to further inflation. This will prevent the further falling of the purchasing power value and at the same time eliminate one factor which has directly (by abnormal price changes) and indirectly (by favoring speculation) caused exchange fluctuations. While inflation proceeds, preventing the vitally necessary readjustment of production and consumption, which alone will raise the purchasing power, there would seem to be no hope for any permanent progress toward rehabilitation and amelioration of the exchanges.

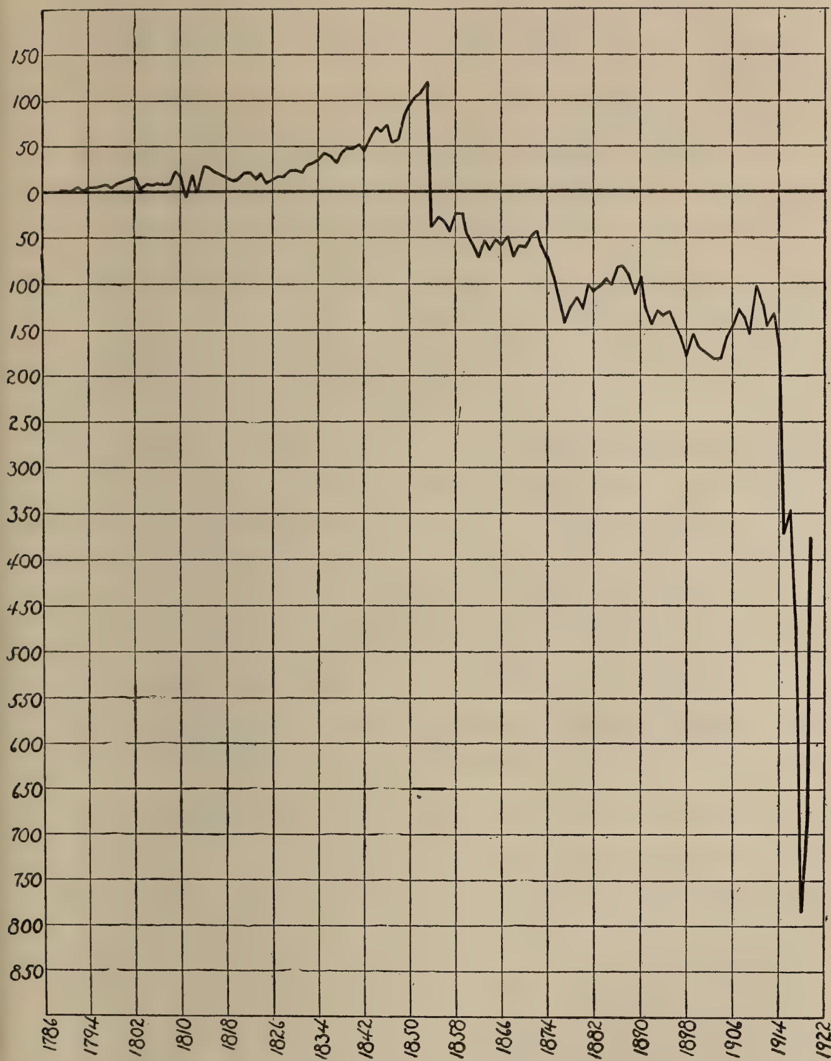
Public Economy

We have seen that one of the chief causes of inflation is the incessant demand for money on the part of the governments. Even a very cursory examination of conditions will make it clear that the European nations cannot, with impunity, continue to incur tremendous expenditures which are only partly covered by taxation or by loans subscribed from real surplus income. However justified and in a certain measure indispensable these expenditures may be, they are today out of proportion to the financial capacity of the various peoples, and to that extent a direct serious hindrance to any revival of production and trade. The channels through which new quantities of artificial purchasing power were created, in many cases not for productive purposes, must be hermetically closed. The budgets must be permanently balanced. The public "standard of spending" must be reduced.

The power of production forms the very source of effective taxation. The burden imposed upon the citizens to meet the expenses of the state must not exceed the highest practical limits. Too heavy taxation reduces production and very often raises both the amount and the velocity of expenditures. It tends to handicap legitimate expansion, as it prevents the business man from putting back into his enterprise his excess profits for normal upkeep and growth. Finally, inasmuch as most trades are carried on partly on borrowed capital, the demands of the internal revenue agent are often satisfied through the medium of new loans contracted through the banks. The scope of the annual obligations of governments, as of individuals, must be brought within the limits within which solvency may be preserved. The patriotic willingness of the citizen to pay taxes must not be put to too severe a test lest he be obliged to lower too intensely and too rapidly his accustomed standard of living and become ultimately a liability to the community instead of an asset.

Some European governments find it difficult or impossible to balance their budgets and consolidate their finances at the present moment pending the fixation and collection of the reparations which will adequately compensate the allied nations, notably France, for the damage wrought in their territories.

No. 17



The British Merchandise Balance

BALANCE (net) of imports and exports of merchandise between the United Kingdom and the rest of the world annually in £1,000,000.

No 1813 figure, since records destroyed by fire; 1815, two figures due to change of fiscal year.

For further comment on this chart see page 116.

This uncertainty rests heavily upon international trade and finance.

Private Economy

Restrictions should be imposed upon the capital demands of the individual business enterprises abroad in the form of discrimination as to the credit granted, or by adjustment of the interest rates, in so far as these requirements are not conducive to the employment of the productive forces of the community in industries producing actual wealth in the form of new goods. A high rate of interest will not, under all circumstances, as the business man more or less instinctively feels, curtail essential production. A high rate of interest directs the use of capital or credit into those channels where both capital and credit will find the most immediate and most needed employment.

The production of non-essentials needs to be checked, and the supply of money in the form of credit restricted by provident reserve requirements and by immovable limits as to note issues. The limited supply of capital must not be tied up in enterprises which though entirely safe and solvent will not be actual producers in the near future. All the productive energies should be directed toward such constructive activities as promise to give quick and regular returns in the form of necessary commodities or products.

Cessation of government inflation involving the stopping of the continuous manufacture of fiat money in its various forms, and a discerning distribution of commercial credit will free international trade from the prohibitive risk which is inherent in the abnormal fluctuations of the prices of merchandise and changes in purchasing power. It will also prepare the ground for the rehabilitation of confidence so necessary to attract foreign capital again to the debilitated markets of Europe.

Contraction of Currency

Contraction of Europe's inflated currencies would seem to be possible only by a reversal of the processes of the war; namely, by redeeming banknotes and advances from the central banks with the proceeds of internal loans or taxes over and above present expenditures. Such a policy, however, to succeed, must take care that the loans, the levies of capital, and the taxes are pro-

portionate to the liquid wealth and the annual income of the citizens; that they are not so oppressive as to drive the citizens to the banks for accommodation. All the instrumentalities of the financial markets should be used cautiously toward that end. Cautiously, because deflation, just as inflation, if it exceeds certain limits may have the most serious effects on the economic progress of a country. Too rapid and too extensive deflation are equally liable to disrupt trade and credit and to react, during a period at least, against those countries applying too radically this cure. Moreover, allowance must be made for the fact that all countries need today much greater quantities of circulating media; prices of merchandise have risen, the volume of business in general has increased, and finally, in certain countries the hoarding or exportation of currency justify a larger circulation. It is quite apparent that the purchasing power of the various countries cannot rise during a prolonged period of falling prices and general depression which is always followed by reduced production and by a decline of national wealth.

One disadvantage of deflation for the European governments —one reason why they are loath to adopt such a policy too precipitately—lies in the fact that deflation is likely to increase instead of lightening their financial burden. Deflation reduces their taxing power; it results in smaller incomes.

Resumption of Gold Payments by Deflation

Theoretically, deflation to a point where gold payments may be resumed appears possible only in the case of Great Britain, where both the "gold discount" and the actual depreciation are relatively small.[61] This presupposes, of course, that to reach the former gold par there be a deliberate policy and willingness to incur the sacrifices involved in submitting to substantially reduced expenditures, adequate bank rates, and, if necessary, reduction of imports which would have to be paid again in gold,

(61) It may be of value to comment shortly upon the gold premium which has appeared in Great Britain and has been used from time to time as an index of the depreciation of the pound sterling. It has been endeavored to establish the extent, if any, to which the dollar will buy more merchandise in England than in the United States, by comparing the gold premium in England with the discount on the pound sterling in New York. Upon examination, this comparison is obviously not accurate because the amount of gold offered in the London open market is insignificant compared with the amount of indebtedness to be settled. Therefore, the owners of the

if not covered by other foreign revenues. In other countries it would today appear to be almost impossible to deflate the paper currencies to the pre-war gold pars by means of contracting the total quantity of circulating media without spoliating the legal rights of the individual holder as expressed in the face amount of his bills or notes.

Inflation by the United States

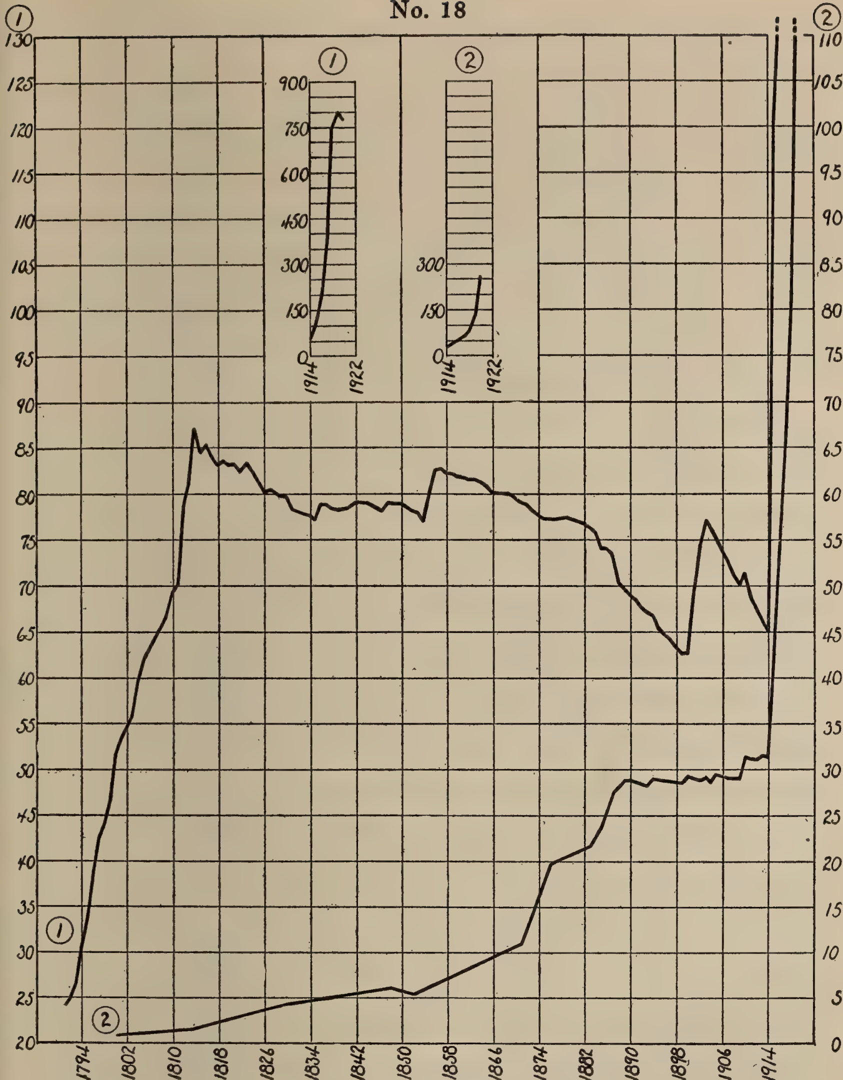
The converse method of having the United States inflate its currency would raise the prices of merchandise here. Consequently, not only the foreign exchange rates but also the foreign securities bought here and payable in foreign currencies, would increase in value just as if Europe had brought about by deflation a fall in her merchandise prices and a decline in the premium quoted on the dollar abroad. It would make it easier for Europe to pay its debts to the United States. But our investors and our government would get less in terms of merchandise for the original capital placed in foreign securities payable in dollars. To be more explicit, in order to repay us the fifteen billion dollars borrowed from us, our debtors would have to ship us much less goods than we shipped them when these loans were granted. In other words, Europe received from us originally, for these fifteen billion dollars, more goods than we would receive and accept from her in full payment. It would virtually amount to cancelling a part of Europe's debts, and it has the large objection that inflation here would falsely stimulate the consumption and production in our own country and throw out of gear the equilibrium between them; it would not be a salutary blood transfusion, but only a bleeding which in the end would render our economic position more nearly like that of our debtors.

Cancellation or Repudiation

Another method by which the exchanges might perhaps be restored to their former parities has come prominently before

new output of gold obtain for it not only the premium due to its greater purchasing power, as expressed in paper money, but a price above that according to the actual depreciation which this paper money has suffered in foreign markets beyond its real purchasing power. In fact, the gold premium fluctuates closely with the exchange. The volume of exchange transactions in paper is so much larger than the volume of gold dealings. Therefore, it may be safely stated that the gold premium will follow the exchange discount and not vice versa.

No. 18



Public Debt

(1) Public debt of Great Britain annually in £10,000,000. Total of funded debt. From 1855 on, the total of funded, unfunded, and terminable annuities; no unfunded or terminable annuities existed prior to that time.

Insert reduced to 1/30 of main scale.

(2) Public debt of France in 1,000,000,000 francs. The funded public debt of France alone up to 1885; from then on funded R. R. and other debt has been added. Annual figures from 1890 only.

No figures available for 1870, 1915, and 1916.

Insert reduced to 1/30 of main scale.

For further comment on this chart see page 116.

the public in recent discussions; viz., the possible repudiation or cancellation, on the part of Europe, in some form or other, of her internal loans and/or the suspension of interest payments on such internal bonds.

The cancellation of some of the *external* loans by the foreign creditors would represent either a compensation for services rendered or a gift, but not a repudiation on the part of the borrower. The annual balance of indebtedness of the debtor country would be improved, while in the case of repudiation of an internal loan, this balance would not be directly affected.

Repudiation will also result from the cancellation or complete depreciation of all or part of the fiat banknotes issued by governments or governmental agencies. In the last two hundred years, such a collapse in value has occurred in a number of instances, for example: In 1720 in France (the South Sea Bubble under Law); in 1777 in the United States (Continental bills); in 1796 in France (assignats); in 1811 in Colombia; in 1822 and 1875 in Peru; in 1846 in Portugal; during the Civil War in the United States (Confederate notes in the South); in 1865 in Uruguay, and also temporarily in Austria-Hungary, Greece, Italy, and Russia.

Currency Reforms

As regards currency reforms, there are different ways of achieving them. First, the face amount of paper money may be reduced to a lower face value. Such a reduction which would be tantamount to composition with the creditors (holders of the notes), will not affect in the least the foreign exchange rates of the countries involved, except perhaps numerically. The purchasing power value of the new currency, as expressed in terms of merchandise, will be unchanged. In enacting such reforms, it will, of course, be necessary at the same time to write down all the deposits on the books of the banks, all outstanding internal bonds and legal instruments of payment, all domestic contracts and obligations of whatever nature (public or private) on the same scale, only excluding foreign obligations payable in gold or foreign currencies.

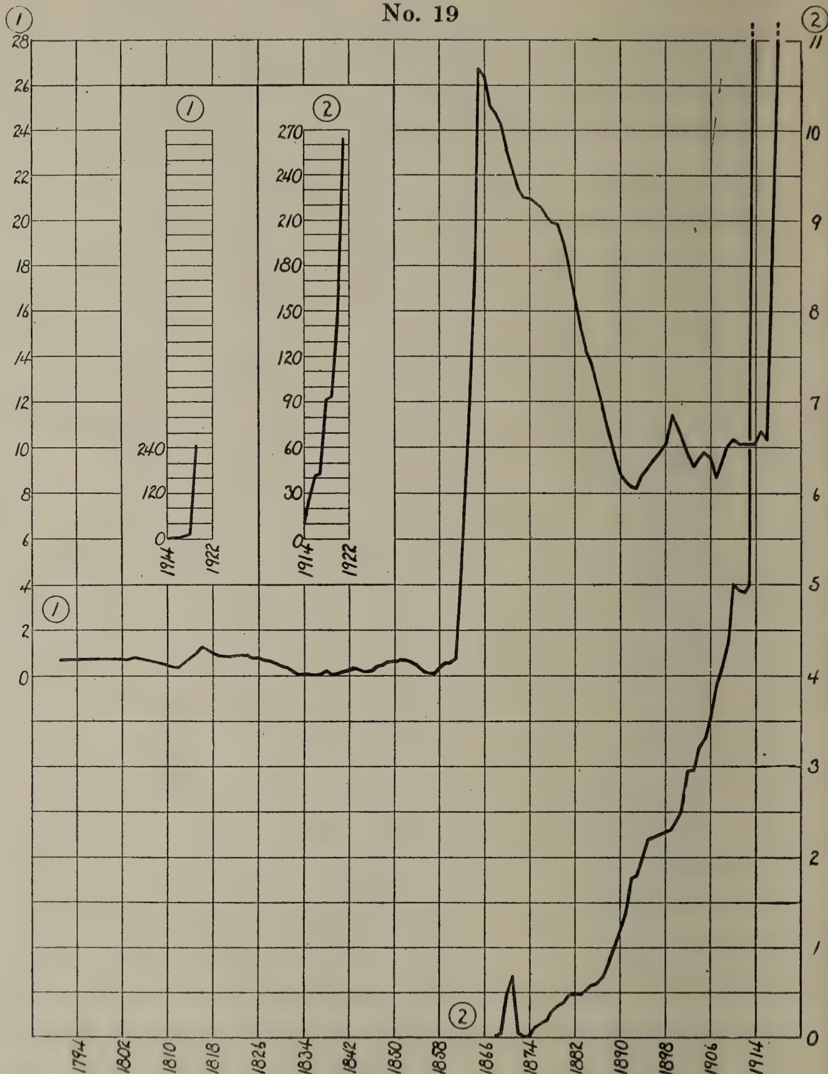
In order to re-establish a gold parity, there are two possible methods: First, the outstanding banknotes are converted at a

certain ratio into money of a lower denomination, payable in gold at the *former par;* second, all the banknotes in circulation on a certain date will be redeemable in gold at a smaller ratio than the one in force to date in all gold standard countries. Such currency reforms have been undertaken in the past by the Argentine Republic and Brazil. The temporary effect of either of these two measures on the foreign exchanges will depend on the ratio adopted for the writing down of the face value of the banknotes or the reduction of the gold contents of the currency unit. If the ratio is equal to the "gold discount" plus "undervaluation", if any, the foreign exchange rate, other things being equal, will remain at its former level; if the ratio is to the advantage of the holder of the notes, exchange will appreciate, and vice versa.

A scaling down of the gold equivalent of the European currencies by either of the above methods would, however, not make for a permanent stabilization of the currencies, if the factors which are responsible for the decline of the exchanges and the fluctuations should continue to exercise their influence even after such a procedure. Should some of the European countries, as a consequence of a financial reorganization of this nature, resume payment in gold (and in case the balance of indebtedness were not fundamentally changed through economic measures tending to affect the necessary equilibrium between production and consumption), the creditor countries would receive gold in payment of annual balances and Europe would be compelled, sooner or later, in view of her limited gold reserves, to debase her currencies once more. On the other hand, should certain nations succeed in establishing and maintaining a relation between their paper currencies and gold, they would regain the advantage of having their exchanges stabilized, the fluctuations being again, as formerly, limited by the two new gold points which would then automatically come into existence.

By different processes of reasoning we have arrived at the conclusion that while it is indispensable that inflation should be stopped, it is desirable that the execution of the necessary policy of deflation be pursued with caution so that the whole economic system of the countries involved be not unduly disturbed.

No. 19



Public Debt

1. United States: Public debt of the United States, less cash in the Treasury annually in $100,000,000.

Insert reduced to 1/60 of main scale.

2. Germany: Sum of the interest bearing and non-interest bearing debt at the end of every year in 1,000,000,000 marks.

Insert reduced to 1/60 of main scale.

For further comment on this chart see page 116.

VII.

The Foreign Exchange Outlook

Foreign bills of exchange, during a given period of time, may rise or fall in value; however, as long as the normal course of foreign trade is not interfered with, their quotation can never permanently rise above or permanently fall below the level which is indicated by their real value in terms of gold or goods for which they are delivered as a temporary substitute.

The decline of the foreign exchanges is the logical outcome of the unprecedented upheavals of the last six years. No remedies except those which go to the seat of the trouble will cure our present ills. Observers, who have but a superficial knowledge of the causes and the underlying circumstances of the present situation and of the conflicting nature of the influences at work, still propound questions regarding the probable course of the exchange markets in the immediate future, and are inclined to imagine that an expeditious and universal panacea can readily be found and applied. It is difficult indeed for the outsider to appreciate the obstacles that stand in the way of an attempt to interpret correctly the successive and numerous trends of the exchanges ever since the signing of the armistice. Contradictory as they appear to the layman, it must be acknowledged that they are often no less perplexing to the professional. The futility of forecasts in this field has been so profusely demonstrated in the past that today we must be wary and cautious in expressing definite opinions. Fundamental improvements and deep-rooted changes will have to be made in the economic and financial policies of the nations. The present disturbed conditions are the result of a long period crowded with the most revolutionizing events in the world's history, and the recovery from the setback which followed in their wake will, at best, be a gradual, if not long drawn-out process.

In 1830, Baron Louis, the Minister of Finance of Louis-Philippe, King of France, told the assembled Cabinet: "Give me a sound national policy and I shall give you sound national finances!" Forgotten though they seem to be, these words express in the simplest form what is wanted today: Sound principles, sound institutions, and sound judgment. A definite workable program must be put forth and carried into effect for the adjustment of the political differences still existing abroad. The unreserved co-operation of the European peoples must be secured for the sincere enforcement of these primary reforms: "Restoration of order in public finances, purging of currencies, and freedom of commercial transactions." (Brussels Financial Conference, Report of the Committee on International Credits.) Then, if, under the effective surveillance of the lenders, rational distribution by responsible governments or representative public bodies can be secured, the exportation of the required raw materials, commodities, and products may be financed to the fullest desirable extent by way of long term investments or credits. The disturbed relationship between production and consumption will be corrected. The debtors, after having covered their own elementary internal needs, will be able to provide for the payment of the interest and moderate funding charges on their external loans. The annual accounts with their foreign creditors will again be balanced. The value of their monies and obligations will no longer depreciate. The decline of the exchanges will come to a natural halt.

Failing such positive action the purchases of merchandise by Europe, and for that matter, also by a number of our other foreign customers, will be considerably reduced, to the great detriment of our domestic economy. The supply of exchange will continue on a steadily increasing scale and an adequate demand will not come forth. The downward tendency, especially if it is reinforced, as it probably will be, by continued inflation in Europe, is bound to make further progress, all ephemeral recoveries notwithstanding.

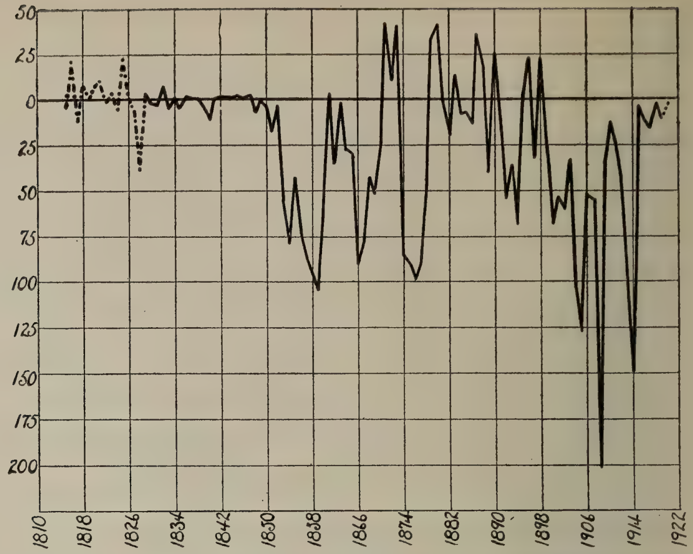
The nature of our trade and financial relationship with foreign countries, and especially with those of Europe, has changed since 1914 in such a manner that we can no longer view with

equanimity this latter eventuality. Nevertheless, there would not appear to be any ground for undue apprehension. The course of events will probably in no small measure depend on the discerning use which we shall make in the immediate future of our influence and credit which have never before stood so high in the world. By a strange reversal of history, the events which have brought about the impairment of the finances of the nations arrayed in or affected by the World War, have placed our country in a very favorable strategic position which has not been altered, to any considerable extent, by the depression that has marked the last half of 1920 and from which we are just emerging.

Precious lives and property have been destroyed, but in many countries appreciable progress has already been made toward normality. The human ingenuity and fundamental forces which in the past have put capital to fertile use are not obliterated. These superior qualities and remarkable characteristics have been among the essential elements in the prosperity of the old hemisphere in the days when it enabled other countries to develop their natural riches and work out their own destiny by lending them ready and ample assistance in the form of money and manpower.

After the present period of transition, unless all lessons of the past are to be contradicted by the experiences of the future, these latent powers and innate traits will again come to the fore in the laboratories and workshops of Europe. Then it may be confidently expected that efficiency and industriousness will revive with a vigor, the intensity of which can be amplified only by the urgent need and the ardent desire for the quickest possible rehabilitation. We may feel assured that, whether it occurs in the near future or whether the patience and faith of our friends and associates abroad is to be further tested, the movement of the foreign exchanges will accurately reflect, and perhaps presage, the coming of this era of renaissance.

No. 20



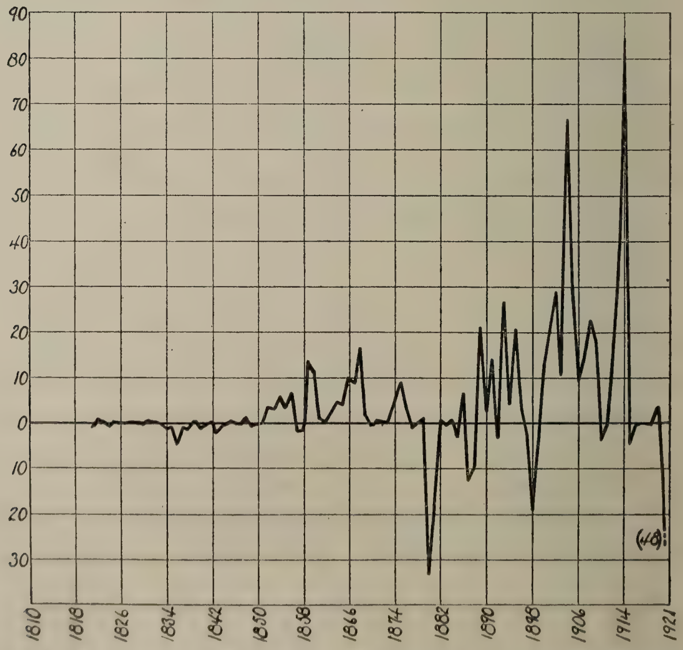
Gold Imports and Exports French Gold Movements

Balance (net) of imports and exports of gold between France and the rest of the world, annually in $1,000,000.

—·—·—· Balance of gold and silver imports and exports.

- - - - - - - 1920 figure 7 months only.

No. 21



Gold Movements Between United States and France

BALANCE of imports and exports of gold between the United States and France annually in $1,000,000.

Figures for exports from the United States include domestic and foreign exports.

For further comment on this chart see page 113.

ADDENDA

Historical Survey

Foreign exchange history during the past one hundred and thirty years reveals three periods of major disturbances: first, the French Revolution and the Napoleonic Wars; second, the Civil War; and third, the Great War. We propose to compare briefly the outstanding economic features of the first two periods with those surrounding the recent World Conflagration.

Civil War

Exchange

We find certain striking parallels in comparing conditions during the Civil War with those which prevailed lately. The leading countries of Europe were then on a metallic standard, while the United States had a depreciated paper currency. Today our country is on a gold basis, whereas Europe, as a whole, has departed from the gold standard. Beginning with 1860, the foreign exchanges went against the United States, fluctuating to about the same extent as did the gold premium, which in its turn reflected more or less accurately the depreciation of our paper currency.

Deflation

After 1865 the world entered upon a period of declining gold production which lasted until 1891. This factor, in the face of increased population and movable wealth, made for lower merchandise prices (that is to say, for a higher value of gold). The same problem of enforced and almost automatic deflation of prices, caused by a supply of gold which does not keep pace with the increasing production of goods, is likely to face the world again during the years to come, according as it is able to, and does go back to the gold standard. Even if but few countries remain on a gold basis, and if, owing to the

enlarged production of goods, the annual gold production is less than the increase of the annual demand for gold, the effect of such deflation is bound to be felt not only by the gold standard countries but also by all other countries, through the action of the foreign exchanges on the price levels (providing such action can make itself felt as a result of the restoration of free commerce).

Economic Conditions

The economic conditions during the Civil War were fundamentally different from those which prevailed during the recent world struggle. Half a century ago our country had a great wealth of unexploited resources; government expenditures were quickly reduced and inflation stopped. None of these things is true of the Europe of today. In the seventies, European capital sought American investments in order to employ her surplus savings; labor was not extensively organized. Wages, therefore, could be more rapidly adjusted to meet the drop in prices than seems possible today, either here or in Europe. Moreover, the productive capacity of the various countries was vastly raised by numerous and epoch-making inventions. Our country soon assumed the first rank among the agricultural producers and the exporting nations. Unless new and startling inventions come to light hereafter, it does not seem probable that Europe, after the recent war, will go through a similar evolution.

The Napoleonic Wars

Economic Conditions

The general economic situation after the Napoleonic Wars shows rather more analogies to the present conditions than those witnessed after the Civil War. The Civil War, despite its magnitude and the destruction wrought, especially in the South, was after all but a local struggle. The Napoleonic wars, if the war of 1812 is included, were truly world wars. The hostilities were long and strenuous; the loss of lives and property immense; embargoes, inflations, gold premiums, blockades, subsidies, indemnities, price fixing, were witnessed, just as during the recent war.

Exchange

The pound sterling declined during the French Revolution and the Napoleonic wars up to the outbreak of hostilities between our country and Great Britain. Fluctuations followed closely the gold premium quoted in England beginning with 1797. In 1814, as the climax of a period of wild-cat banking which had begun in 1802, gold premiums appeared also in different parts of our own country. With a premium on gold prevailing in Great Britain and a similar premium paid in the United States, sterling exchange here sought a balance between them. For example, as paper currency depreciated in Baltimore[62]—the premium on the gold dollar rose—those merchants doing business in Baltimore had to pay more paper dollars for the paper pound sterling, but this premium on the paper pound would again be reduced as soon as the quotations from London reflected a rise of the premium on the gold pound in Great Britain.

Trade

As has been the case after the recent struggle, a post-war boom took place in Great Britain in 1814-1815. She had produced large stocks of goods to meet expected demands after the restoration of peace. However, it soon became evident that the world, and Europe especially, could not assimilate all the merchandise that was thrown on the markets; besides, foreign competition was encountered when the seas were again opened to trade. By the introduction of the factory system at that time, the United Kingdom was able to produce more and more, while Europe consumed less and less for lack of funds caused by financial exhaustion. This situation was aggravated by a series of poor crops all over Europe. A crisis in Great Britain in 1815 and another of short duration in 1818 were the result. Our country, too, experienced a setback between 1819 and 1822. This development resembles the slump in trade and the stringency of credit conditions which took place during the second half of 1920.

([62]) See Chart No. 30, page 110.

Prices

Prices rose during the Civil and the Napoleonic Wars, not so much because of a shortened supply of goods, but because of inflation. As the inflation was curbed and production relatively increased, prices returned to their previous levels.

Taxation

Figures on national income are not available for the early part of the last century. It is, therefore, impossible to determine whether taxation today is more or less burdensome than it was then. It may, however, safely be stated that, even allowing for changes in price levels, the individual taxpayer today pays higher taxes, and by virtue of his higher income is better able to bear them.

Interest Rates

Interest rates rose during all wars with increasing demand for capital, and gradually receded as the need for it was no longer pressing. This is but partially reflected in the rates of the central banks, due to the fact that, just as during the last six years, they maintained their discount rates below those warranted by the scarcity of capital.

Summarizing, prices of goods, taxes, and interest rates experienced a more or less sharp rise during all the wars which we have discussed, and were followed by a less rapid fall in the years immediately after the restoration of peace. Although some of these phenomena may bear a close resemblance to those noted during the World War, it is not safe to assume that this similarity will also extend into the future to all other related factors.

We must not forget that the background and the basic conditions which have confronted the world ever since the armistice are radically different. During and after the Napoleonic Wars, and even after the Civil War, the world was still essentially agricultural. In 1815, England alone had introduced the industrial system, and for this reason also suffered temporarily more than the other belligerents. The various countries were largely

self-sufficient and, in periods of depression, they always had the refuge of releasing part of their surplus consumers through emigration to virgin or undeveloped continents. Our own country possessed enormous untapped resources, and its population was smaller. Credit had barely been developed. Foreign trade, compared with domestic trade, was still in its infancy. Lending to foreign countries was chiefly the domain of Great Britain. Interest charges were relatively unimportant in the balance of payments.

In short, although the problems to be solved are the same today as they were fifty-five, and one hundred years ago—destruction of property, depreciated currency, inflated prices, and dislocated commercial relationships—the economic situation of the various countries is so different that no analogies may safely be drawn without almost nullifying qualifications. It is true that the possibilities for improvements and more rapid recovery than took place after previous wars seem to be so much greater today, because of the vastly larger potential productive capacity and the progress made since then in all fields of human endeavor. On the other hand, the interdependence of all countries and continents has also increased to no small extent, and disease or decay in some parts of the body politic are more likely to delay the recuperation of the whole.

NOTE ON THE CHARTS

We have been obliged to restrict our research to the United States, Great Britain, France, and Germany, as we have been unable to obtain for other countries the necessary data running back, more or less continuously, into the early part of the 19th century.

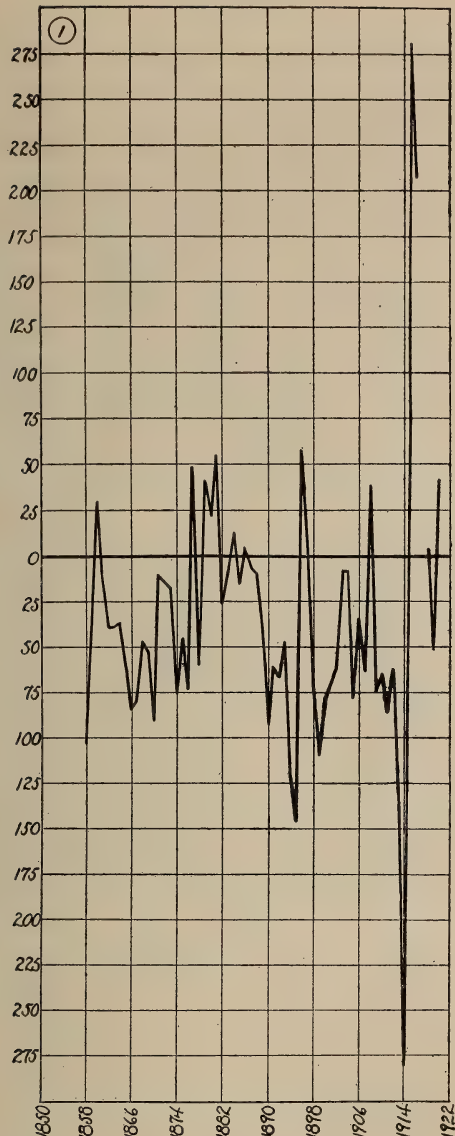
Certain charts have inserts. Volume of trade, size of government debts, amount of money in circulation, etc., have all increased so tremendously that, in order to preserve the fluctuations witnessed in the early part of the last century, it has been found necessary to break the graph in many cases, after the beginning of the World War. The graph has then been continued in the insert on a very much reduced scale. This reduction is indicated opposite every chart.

All the charts showing the balance of trade, or merchandise, or gold, have a heavy black line, which is marked zero. This may be explained by one example: In chart No. 1 entitled *The Visible Trade Balance of the United States;* whenever the graph is above the zero line, it shows that the sum total of all the exports of the United States to the rest of the world has exceeded the total imports of the United States from the rest of the world, by an amount indicated by the distance of the graph from the zero line.

In 1918, the U. S. Bureau of Foreign and Domestic Commerce changed its fiscal year from July-June to January-December; therefore, in all those charts showing movements of goods and merchandise involving the United States, two figures have been given for 1918; the first being the figure for the fiscal year ending June 30, 1918, and the second, the figure for the fiscal year ending December 31, 1918; there is thus an overlap of 6 months in the two figures quoted.

The historical data describing certain of the charts has been divided into two columns, one referring to the high points and the other the low points of the graph.

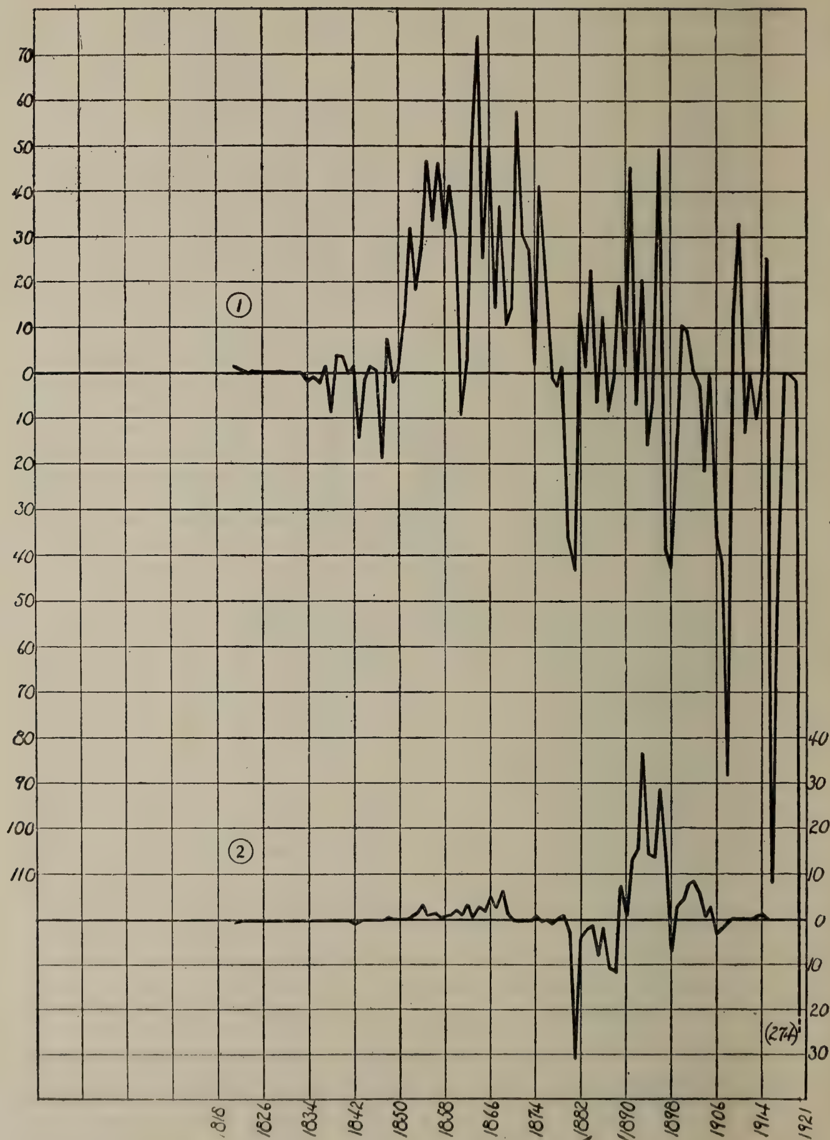
No. 22



British Gold Movements

BALANCE (net) of imports and exports of gold between Great Britain and the rest of the world annually in £100,000. No 1917 figures available; 1919 figures for the last 6 months of the year only; 1920 figures for 11 months only.

No. 23



GOLD IMPORTS AND EXPORTS

For further comment on this chart see page **113.**

Gold Imports and Exports

(1) Balance (net) of gold imports and exports between the *United States and Great Britain,* annually in $1,000,000.

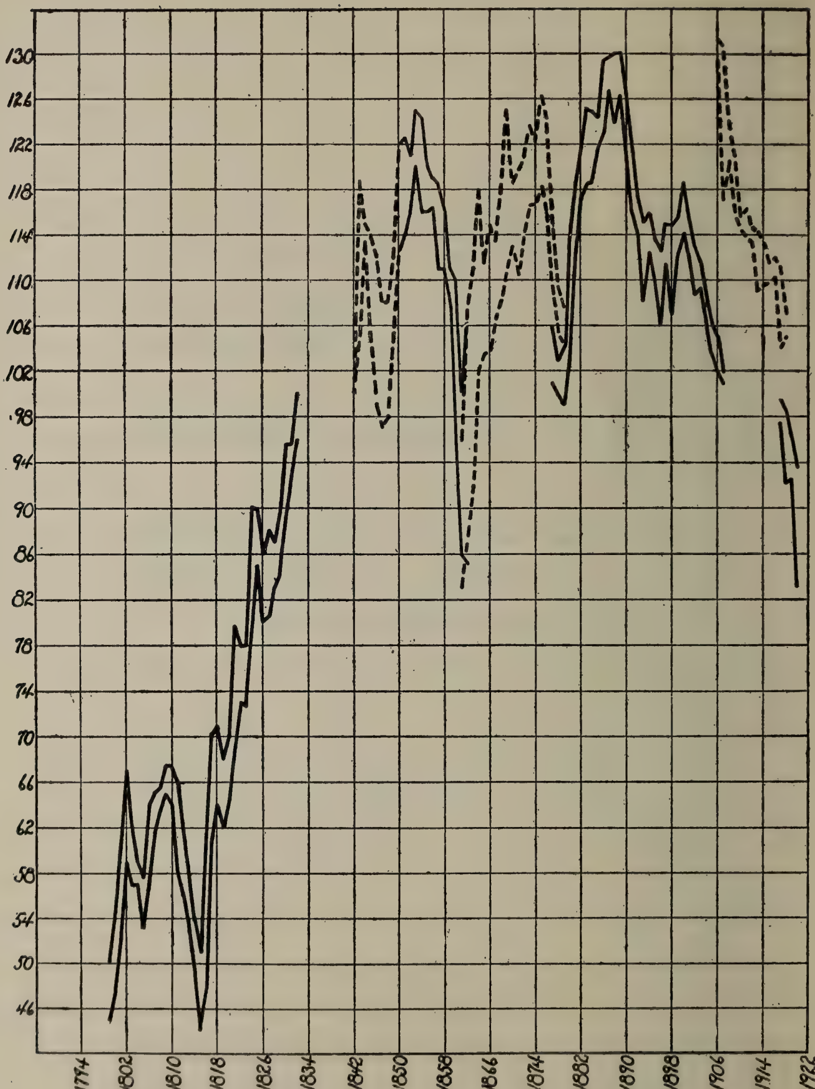
(2) Balance (net) of gold imports and exports between the *United States and Germany,* annually in $1,000,000.

Export figures are sum of foreign and domestic exports. Since imports and exports of gold and silver are not separable, 1821-1824, the figures used for those years are the net balances of gold and silver imports and exports together.

Export figure for 1863 contains domestic export of silver.

The 1920 figure of Great Britain ($274,883,-397) is so large, due to the transfer from the Bank of England of gold which already belonged to the United States, but had merely not been shipped. (See comment on chart No. 3.)

No. 24



UNITED STATES GOVERNMENT SECURITY QUOTATIONS

United States Government Security Quotations

Annual high and low quotation in New York and Boston:

United States 3% paid in 1833, Boston.

No government bonds outstanding 1834-1842.

United States 6% of 1862, 1842-1849, Boston.

United States 6% of 1868, 1850-1861, Boston.

United States 1881 coupon 6%, 1861-1879, New York.

United States 1907 coupon 4%, 1877-1907, New York.

United States 1925 coupon 4%, 1906-1918, New York.

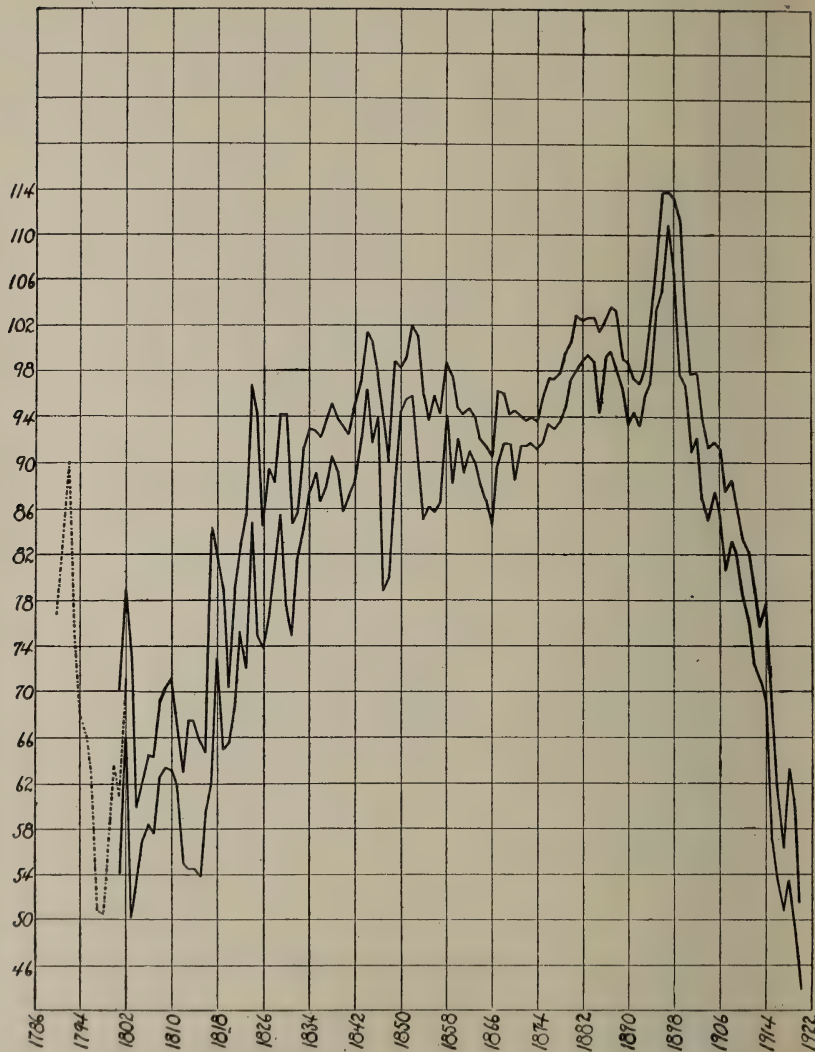
United States 1st Liberty 4% 1932-1947, 1917-

(On account of the varying and short maturities, it was found impossible to convert all the bonds to a uniform % basis to make a useful curve; such a computation does not result in a continuous curve of quotations.)

Stock Exchange closed July 31st to Nov. 17th, 1914, both inclusive.

1812-15 War of 1812.
1814-17 Currency disorders in U. S.
1848 Expedition against Mexico.
1860 Outbreak of the Civil War.
1877-78 Strikes and depression in the United States.
1893 Crisis in the United States.

No. 25



BRITISH GOVERNMENT SECURITY QUOTATIONS

British Government Security Quotations

———— Annual high and low quotation for British consols in London.

—·—·—· Yearly average quotation.

a. Up to April 5th, 1889, the rate of interest was 3%; for the 14 years ending April 15th, 1903, 2¾%; now the rate is 2½%.

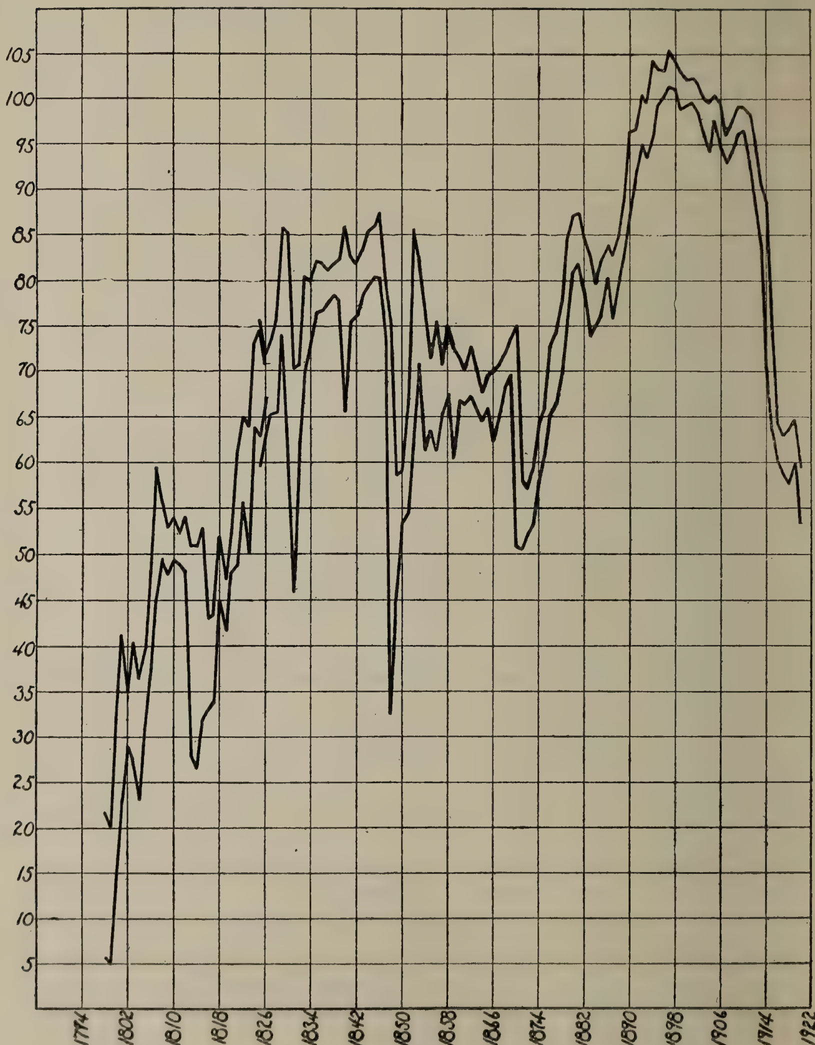
b. The Stock Exchange was closed July 30th, 1914 to the end of the year.

c. Minimum price (65) removed Nov. 23d, 1915.

1793 France declares war on England.
1801 Peace of Amiens.
1816 Recovery of consols after downfall of Napoleon.
1898 Boer War.
1914 Outbreak of Great War.

1797 England fears invasion by France —Inflation by the Bank of England.
1800 Crisis in England.
1803 War breaks out once more with France.
1810 Crisis in England.
1815 Climax of struggle with Napoleon; Crisis.
1825 Crisis in England.
1826 England fears war with France.
1831 Riots in England and Ireland.
1847 Crisis in England.
1854 Outbreak of Crimean War.
1866 Crisis in England.
1870 Outbreak of Franco-Prussian War.
1885 Difficulties with Russia and Egypt.
1890 Crisis in England.
1907 World Crisis.

No. 26



FRENCH GOVERNMENT SECURITY QUOTATIONS

French Government Security Quotations

Annual high and low quotation in Paris on a 3% basis.

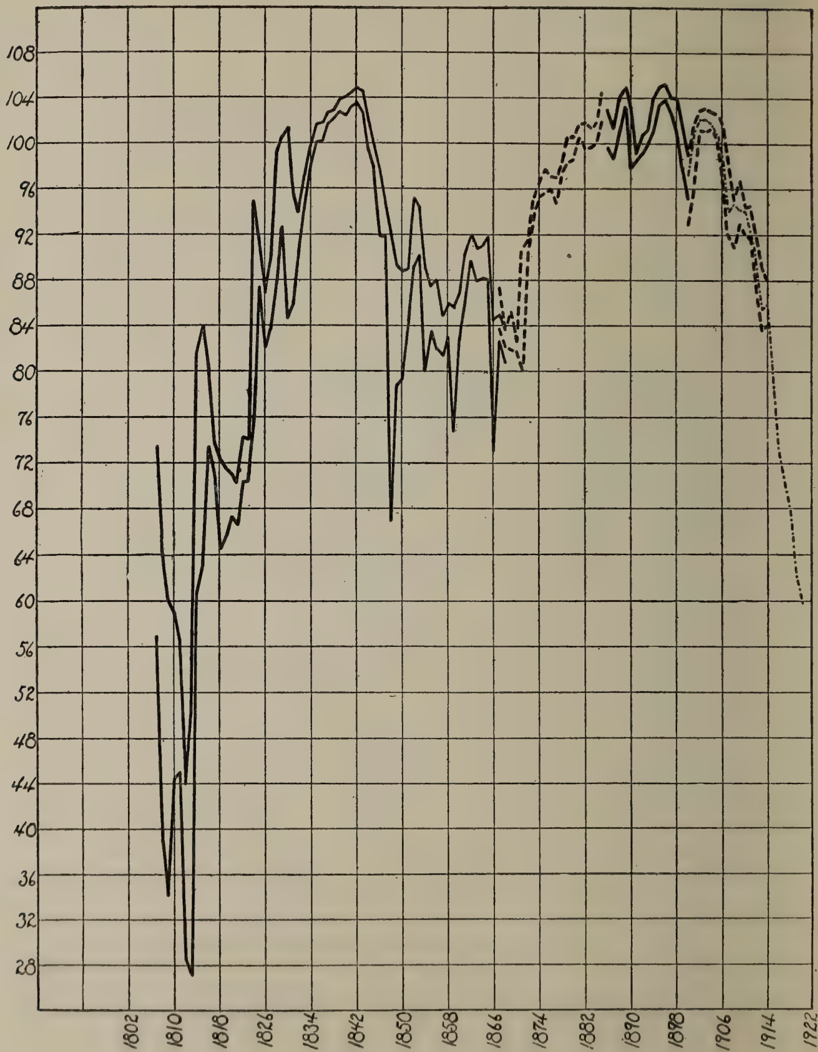
5% Rente of 1793, 1798-1829 recomputed to a 3% basis.

3% Rente perpétuelle 1825-

1799 Bonaparte appointed consul.
1801 Peace of Luneville.
1807 Treaty of Tilsit.
1818 Congress of Aix-la-Chappelle.
1852 Coup d'Etat by Napoleon III.
1856 Peace of Paris in Crimean War.

1813-15 Downfall of Napoleon.
1830-32 Political Revolution in France and elsewhere.
1840 Anglo-French dispute; London conference over Egypt and Turkey.
1848 Political disturbances in France and elsewhere.
1854 Crimean War.
1859 Franco - Austrian War against Italy.
1866 Austro-Prussian War.
1870-1 Franco-Prussian War.
1883 Madagascar incident.
1887 War between Germany and France imminent.
1914 Outbreak of Great War.

No. 27



GERMAN GOVERNMENT SECURITY QUOTATIONS

German Government Security Quotations

Annual high and low quotation in Berlin on a 3½% basis.

————Prussia: 4% Certificates of Indebtedness converted to 3½% basis in 1842; 1807-1868.

-------- Prussia: 4½% Bonds 1866-1885; quotations recomputed to a 3½% basis.

————Prussia: 3½% Consolidated Loan 1866-1900 (fluctuated identically with the 3½% security of the German Empire).

Germany: 3½% Inconvertible National Loan 1900-1920.

--------Annual high and low quotation.

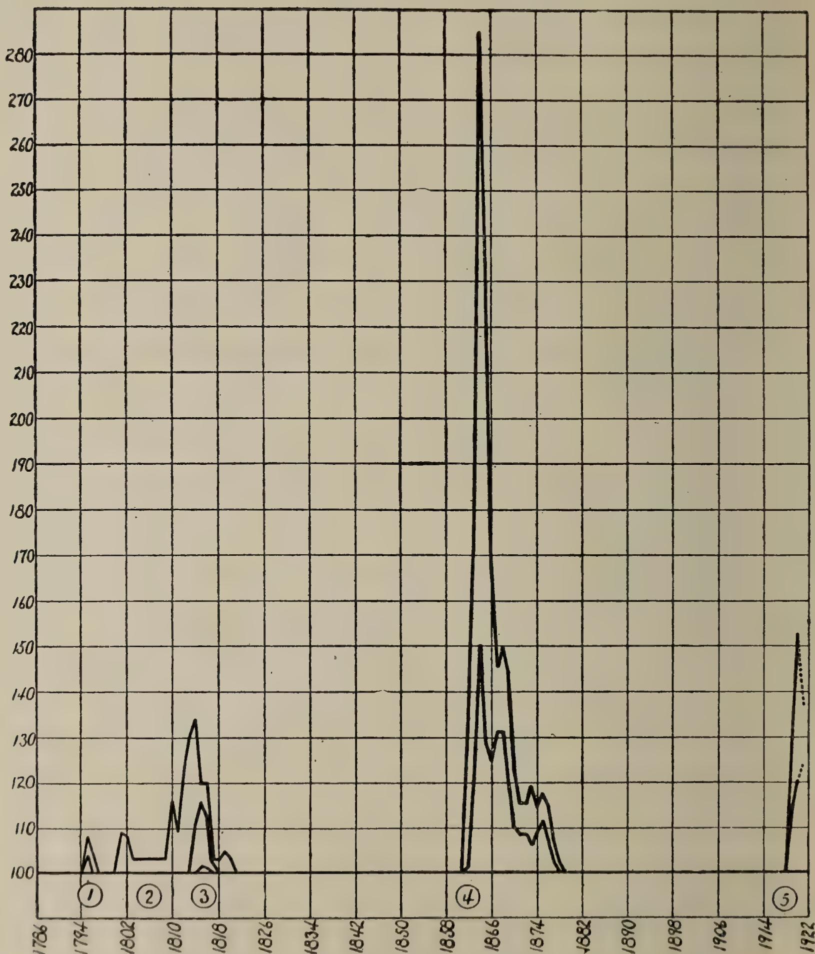
—·—·—· Last quotation of the year.

1914 quotations are Jan.-July only; No quotations for 1915 or 1917.

1815 End of Napoleonic Wars.
1871 End of Franco-Prussian War.

- 1826 Crisis in England, threat of war between England and France.
- 1830 Revolution all over Europe.
- 1848 Revolution all over Europe.
- 1859 Franco-Italian War against Austria.
- 1864 Austro-Prussian war against Denmark.
- 1866 Austro-Prussian War.
- 1870 Franco-Prussian War.
- 1872 Crisis in Germany.
- 1907 Crisis.
- 1914 Outbreak of Great War.

No. 28



GOLD PREMIUMS

Gold Premiums

The prices in paper paid for gold are given on a percentage basis, 100 signifying that gold and paper were interchangeable or equivalent.

(1) London: High and low quotation 1794-1796.

(2) London: Annual average of the gold premium during the suspension of specie payments by the Bank of England 1797-1821.

(3) New York: Annual high and low quotations of the gold premium during the suspension of specie payments in New York 1814-1817.

(4) New York: Annual high and low quotations of the gold premium during the suspension of specie payments in the United States 1862-1879.

(5) London: Annual high and low quotations of the gold premium in London from October 1919, on.

1921 figure to Feb. 4, 1921.

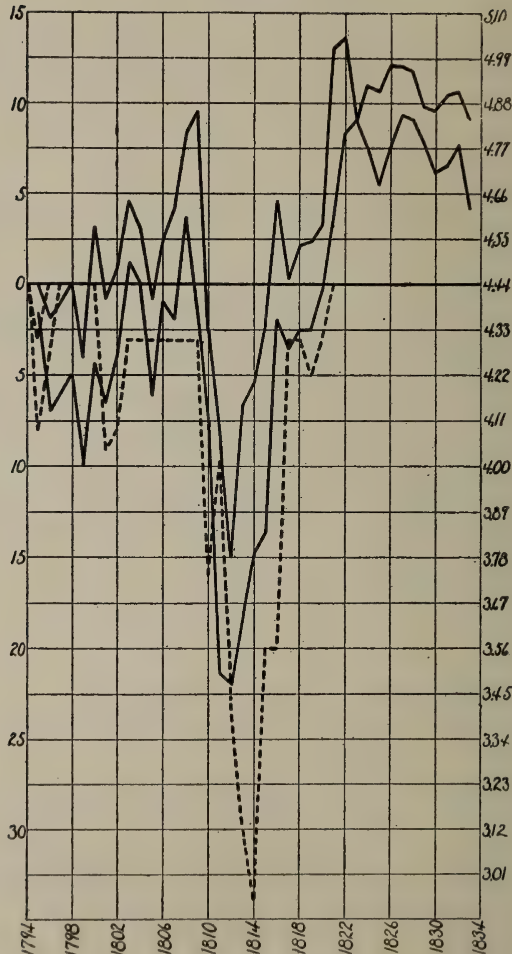
1795-7 Currency disorders in England.

1797-1821 Bank of England suspended Specie Payments.

1861-1879 United States suspends Specie Payments.

October, 1919 England lifts restrictions upon sale of gold to the extent of permitting sales of new gold mined in her colonies.

No. 29



BOSTON EXCHANGE ON LONDON

Boston Exchange on London

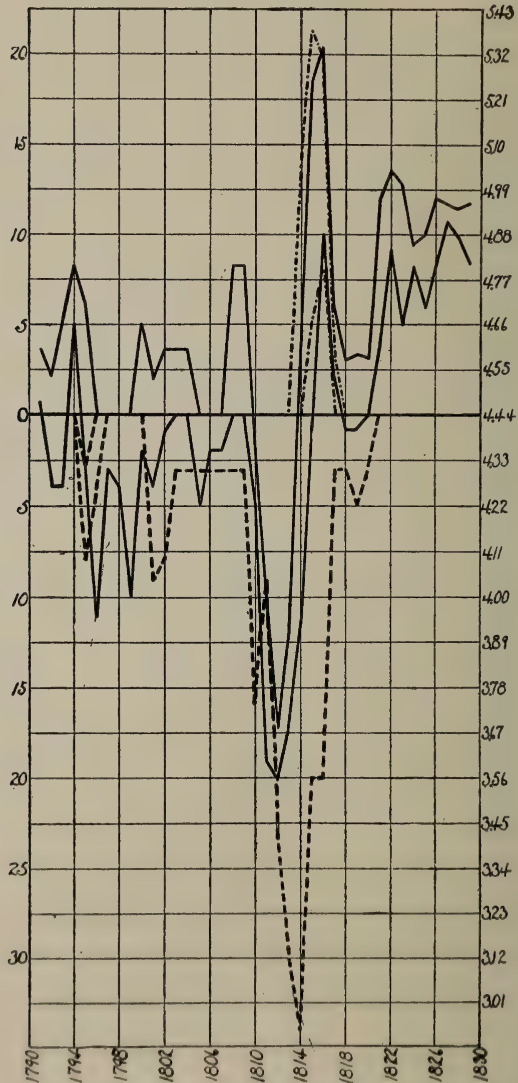
——————— Annual high and low quotation of 60-days sight rates (the number of dollars for the pound) according to the scale on the right; \$4.44 4/9, the gold par, is indicated by the heavy black line.

No quotation 1797; average quotation only for 1823.

-------- The price paid for gold in London expressed as a % of par, par being indicated by the heavy line marked zero (read scale on left downward). Annual high and low quotations 1794-96; annual average quotations during the suspension of specie payments by the Bank of England 1797-1821.

This chart shows the effect of a depreciation of currency on exchange rates; England's currency depreciated (as witnessed in the rising gold premium) and exchange followed it. The peak of depreciation was attained in 1814. The lowest point of the exchange, however, was reached in 1812. Exchange did not continue to depreciate, following the currency depreciation, because in 1812 the war with England broke out. This fact tended to pull the exchange in the opposite direction.

No. 30



BALTIMORE EXCHANGE ON LONDON

Baltimore Exchange on London

———— Annual high and low quotation of 60 days sight rates (the number of dollars for the pound) according to the scale on the right; \$4.44 4/9, the gold par, is indicated by the heavy black line.

-------- The price paid for gold in London expressed as a % of par, par being indicated by the heavy line marked zero. (Read scale on left downward.) Annual high and low quotations 1794-1796; annual average quotation during the suspension of specie payments by the Bank of England 1797-1821.

—·—·—· The price paid for gold in Baltimore expressed as a % of par, par being indicated by the heavy line marked zero (read scale on the left upward). Annual high and low quotation during the suspension of specie payments in New York 1814-1817.

Compared with chart showing Boston exchange on London during this same period, we have here presented the effect upon exchange of a depreciated currency in both of the countries involved. Whereas, New England Banks managed to maintain their bank notes on a sound basis, banks in the middle Atlantic and Southern States were forced to suspend specie payments so that the notes of these banks sold at varying discounts. Therefore, whereas the gold premium in England tended to force exchange below the gold parity of \$4.44 4-9, the presence of the gold premium in Baltimore tended to pull exchange above this figure. If it had not been for the war, (assuming the balance of trade to have been even) exchange may be expected to have found a balance exactly between the two gold premiums.

THE MERCHANDISE BALANCE OF THE UNITED STATES

Thus, in 1879, there was a large American crop over against small crops in France, Russia and Germany, while England experienced her poorest harvest of the century, and American exports reached hitherto unprecedented levels.

The same situation occurred in 1898. In 1897 there had been a scorching drought in France, while wet harvests and storms reduced the crops in Russia and the Danube valley. The American farmer, on the other hand, gathered the largest crop, with one exception, on record.

Until approximately 1875 the United States was an importing country and she was able to pay for her excess of imports by borrowing on a long term basis from Europe. Since that time exports of merchandise from the United States, with two exceptions, exceeded her imports. Our foreign trade, though to a decreasing extent in recent years, has been affected by the crop situation all over the world. Especially large crops in the United States or crop failures in Europe, or both, have always tremendously increased exports from the United States and thus also increased the export balance of the United States; thus in:

1882 Europe produced largest crop on record; U. S. crop fair.
1891 U. S. crop largest on record; Europe's small.
1892 U. S. crop not particularly good but sold well, since European supplies low.
1893 U. S. crop small; Europe's large.
1897 U. S. crop largest on record with one exception; drought in Europe.
1898 U. S. crop exceeded all precedents.
1902 Good crop here.
1905 Largest world crop on record.
1906 World crop exceeded that of 1905.

Comment referring to Chart No. 3, page 9.

UNITED STATES GOLD MOVEMENTS

Imports and exports of gold to and from the United States are largely connected with its imports and exports of merchandise. Usually whenever exports of merchandise were large, imports of gold also showed an increase. Thus, for example, in:

		See Chart No.
1881	U. S. merchandise exports were large..	2
	U. S. gold imports were large.........	3
1881	U. S. merchandise exports to Great Britain were large..............	11
	U. S. gold imports from Great Britain were large	23
1893	Exports of merchandise to Germany comparatively small...............	14
	Exports of gold to Germany comparatively large	23
1896	U. S. exports of merchandise to Great Britain small.....................	11
	U. S. exports of gold to Great Britain large	23
1898	U. S. merchandise exports to the world large	2
	U. S. gold imports from the world large	3
1890	U. S. merchandise exports to France large	13
	U. S. gold imports from France small..	21
1910	U. S. merchandise exports to the rest of the world small..................	2
	U. S. gold exports to the rest of the world large	3
1910	Small balance of exports to Great Britain	11
	Large exports of gold to Great Britain.	23

Comment referring to Chart No. 11, *page* 53.

UNITED STATES TRADE WITH THE UNITED KINGDOM

1861 Outbreak of Civil War.

1862 General European crop failure.

1879 Poorest harvest of century in United Kingdom; U. S. crop large.

1882 Europe produces largest crop on record; U. S. crop fair.

1891 U. S. crop largest on record; Europe's small.

1892 U. S. crop not particularly good, but sells well since European supplies low.

1893 U. S. crop small; Europe's large.

1898 U. S. crop exceeds all precedents.

1911 Short crop in Europe and the U. S.

Comment referring to Chart No. 13, *page* 60.

UNITED STATES TRADE WITH FRANCE

1862 General European crop failure.

1879 Poor harvests in Europe.

1882 Europe produces largest crop on record; U. S. crop fair.

1889 U. S. crop largest since 1884, and all Europe's crop small.

1891 Europe has poorest harvest since 1879; U. S. crop largest on record.

1892 U. S. not particularly good, but sells well since European supplies low.

1893 Rich harvest all over Europe; small crop here.

1898 U. S. crop exceeds all precedents.

1902 Good crop here.

Comment referring to Chart No. 14, page 64.

UNITED STATES TRADE WITH GERMANY

1879 General European crop failure.
1887 U. S. crop short.
1891 Poor harvest in Europe; U. S. crop largest on record.
1893 U. S. crop small; Europe's large.
1905-6 Good crop in Europe.

In 1920, the excess of exports over imports from the United States to Germany in terms of money exceeded all precedents; the total volume of the trade with Germany was, however, smaller not only in the volume of goods involved but also in dollars and cents.

	Imports.	Exports.	Excess Exports.
1914	$189,919,071	$344,794,276	$154,875,205
1920	88,836,280	311,437,377	222,601,097

Comment referring to Chart No. 15, page 68.

THE MERCHANDISE BALANCE OF FRANCE

France till approximately 1875 was an exporting country. Since that time she has been importing more than she has been exporting, paying the deficit with the returns upon her foreign investments.

1788 Failure of crop in France.
1816 Harvest failure all over Europe.
1862 General European crop failure.
1872 French crop large.
1879 Crop failure in France and all over Europe as well.
1882 Europe produces largest crop on record.
1885 French crop short.
1891 Most serious shortage since 1879.
1893 Europe's crop large.
1905 Large world crop.
1906 World crop even larger than that of 1905.
1911 French crop short.

Comment referring to Chart No. 17, *page* 77.

THE BRITISH MERCHANDISE BALANCE

Great Britain was an exporting country until about 1853. In that year began the third stage of her turning from a protective to a Free Trade nation. Since then the United Kingdom has been importing more than she has been exporting.

1842 Crop shortage in United Kingdom.
1874-77 Poor crop in United Kingdom.
1879 Poorest harvest of century in United Kingdom.
1882 Europe produces largest crop on record.

Comment referring to Chart No. 18, *page* 81.

PUBLIC DEBT OF GREAT BRITAIN

1815 End of Napoleonic War.
1854 Crimean War.
1898-1900 Boer War.
1914 Outbreak of Great War.

PUBLIC DEBT OF FRANCE

1871 Franco-Prussian War.
1914 Outbreak of Great War.

Comment referring to Chart No. 19, *page* 84.

PUBLIC DEBT OF UNITED STATES

1812-15 War of 1812.
1848 War with Mexico.
1861-65 Civil War.
1898 Spanish-American War.
1917 Entry into Great War.

PUBLIC DEBT OF GERMANY

1870-71 Franco-Prussian War.
1914 Outbreak of Great War.

TABLES

TABLE No. Ia.

The Principal Foreign Exchange Rates (a)

	Foreign Currency Unit	New York Quotation March 2, 1921	Par Value of foreign currency in U. S. dollars	Premium on the dollar in terms of foreign currencies (March 2, 1921 Quotation) (b)	Present Value of the dollar in respective countries		Par Value of the dollar in respective countries	
EUROPE		cents	cents	%				
Austria	Crown	.225	20.263	8922	444.44	Kr.	4.93519	Kr.
Belgium	Franc	7.48	19.295	158	13.36	Fr.	5.18262	Fr.
Bulgaria	Lei	1.25	19.295	1444	80.	Fr.	5.18262	Fr.
Czecho-Slovakia	Crown	1.24	20.263	1537	80.6	Kr.	4.93519	Kr.
Denmark	Crown	17.50	26.799	53	5.71	Kr.	3.73148	Kr.
Finland	Finnish Mark	2.90	19.295	566	34.38	Fin. Mk	5.18262	Fin. Mk
France	Franc	7.13	19.295	171	14.02	Fr.	5.18262	Fr.
Germany	Mark	1.585	23.821	1401	53.09	Mk.	4.19793	Mk.
Great Britain	Pound	$3.885	$4.86656	25	5s 2d. (c)		.49316	d.
Greece	Drachma	7.55	19.295	156	13.24	Dr.	5.18262	Dm
Hungary	Crown	.20	20.263	10050	500.	Kr.	4.93519	Kr.
Italy	Lira	3.65	19.295	429	27.39	Lr.	5.18262	Lr.
Jugo-Slavia	Dinar (d)	2.75	19.3	601	36.36	Dr.	5.18262	Dr.
Netherlands	Guilder	34.20	40.196	18	2.92	Fl.	2.48783	Glds.
Norway	Crown	16.70	26.799	60	5.98	Cr.	3.73148	Cr.
Poland	Polish Mark	.1275	23.8	18567	784.31	Pol. Mk.	4.19793	Pol. Mk
Portugal	Escudo or Milreis	9.00	$1.08056	1100	111.11	Esc.	.92552	Esc.
Roumania	Lei	1.34	19.295	1340	74.62	Lei	5.18262	Lei
Russia	Pre-Revolutionary Ruble Notes (e)	.475	51.456	10721	210.52	Rbls. (e)	1.94338	Rbls. (e)
Spain	Peseta	13.91	19.295	39	7.18	Ps.	5.18262	Ps.
Sweden	Crown	22.35	26.799	20	4.47	Cr.	3.73519	Cr.
Switzerland	Franc	16.62	19.295	16	6.01	Fr.	5.18262	Fr.
Turkey	Turkish Pound (=100 Piastre) (f)	72.00	$4.395	510	$1.39	T.Lb.	22.2983	Piastre
NORTH AMERICA								
Canada	Canadian Dollar	87.5	$1.00	14	$1.13	Can. Dol.	$1.00	Can. Dol
Mexico	Gold Peso	50.25	49.846	—1(g)	1.99	G. P	2.0619	G. P.
CENTRAL AMERICA								
Costa Rica	Colon	22.25	46.536	109	4.51	Cl.	2.1488	Cl.
Cuba	Dollar	99.812	$1.00	.2	$1.001875		$1.00	
Ecuador	Sucre	28.57	48.665	70	3.35	S.	2.05484	S.
Guatemala	Peso (silver)	2.38	(h)	....	42.00	S. P.	....	
Honduras	Peso (i)	40.	50.	13	2.50	P.	2.00	P.
Nicaragua	Cordova	98.	1.00	2	1.02	Crd.	1.00	Crd.
Panama	Balboa	50.	50.	0	2.00	Bal.	2.00	Bal.
San Salvador	Peso	46.72	50.	7	2.14	P.	2.00	P.

SOUTH AMERICA								
Argentine	Gold Peso	79.829	96.4645	21	1.2527	G. P.	1.03665	G. P.
Argentine	Paper Peso	35.125	42.4449	21	2.8469	P. P.	2.35576	P. P.
Bolivia	Bolivar	23.00	38.932	69	4.35	Bl.	2.57	Bl.
Brazil	Milreis	15.625	32.444	108	6.4	Ml.	3.082260	Ml.
Chile	Gold Peso	15.00	36.5	143	6.6	G. P.	2.74	G. P.
Colombia	Peso (i)	85.8	97.331	13	1.165	P.	1.02742	P.
Paraguay	Peso (i)	.50	4.00	700	200.	P.	25.	P.
Peru	Pound	$3.80	$4.86656	28	5s. 3d.		4s. 1d.	
Uruguay	Gold Peso	79.	$1.034	31	$1.2675	G. P.	$ .96689	G. P.
Venezuela	Bolivar	17.4	19.295	11	5.75	Bl.	5.18262	Bl.
ASIA								
Armenia	Ruble	.007	51.456	73328	1428.	Rbls.	1.94338	Rbls.
China:								
Hongkong	Silver Dollar	46 85	.....	.....	2.13	S. D.	.....	
Peking	Täel	67.	.....	.....	1.49	Täel	.....	
Shanghai	Täel	62.	.....	.....	1.61	Täel	.....	
India	Rupee (k)	27.25	48.665	78	3.66	Rup.	2.0548	Rup.
Japan	Yen	48.50	49.846	3	2.06	Yen	2.00619	Yen
Java	Florin	35.50	40.196	13	2.81	Fl.	2.48783	Fl.
Philippine Is.	Silver Peso	48.	50.	4	2.08	S. P.	2.00	S. P.
AUSTRALASIA								
Austra ia	Pound	$3.8775	$4.8665	26	5.22	d.	49.316	d.
AFRICA								
Egypt	Piastre (j)	3.7	4.94307	34	27.02	P.	20.02303	P.
South Africa	Pound	$3.86	$4.8665	26	5.23	d.	49.316	d.

(a) For a few of the exchanges quoted the market is entirely nominal and the quotations given in such cases are therefore merely estimates which we do not guarantee.

(b) In order to establish how much a foreign currency has declined from its former par value the following formula is used:

Ex. Austrian crowns: $\frac{20.3 \text{ (former par) minus } .225 \text{ (present quotation)}}{20.3 \text{ (former par)}} \times 100$ (to put on % basis) = 98.8% discount or 1.2% of its pre-war value.

(c) New York exchange in London is quoted on the basis of dollars for one pound (par $4.8665; present quotation $3.88).

(d) When Jugo-Slavia was formed, the dinar was adopted as a unit and the old Austrian paper currency was made convertible into dinars on the basis of 4 dinars to 1 crown.

(e) The quotations are for 100-Ruble notes per ruble. The last quotation of a 1 Livre assignat in 1796 was 1/1600 of the parity. The pre-revolutionary Russian ruble is to-day worth 1/107 of its pre-war value. The soviet ruble is, of course, of less value. According to a recent press notice 1,000,000 Soviet rubles were valued at Warsaw at $50 U. S. money, or .005 cents to the ruble (200 rubles=1 cent).

(f) Quotations for the exchange on Esthonia, Latvia, Lithuania and Ukrania are not available; remittances are being made in dollars.

(g) Mexico is the only country in which the dollar is at a discount to-day.

(h) This country adheres to the silver standard. Between silver and gold standard countries there is no fixed par, the parity fluctuates with the price of silver in terms of gold.

(i) Paper peso on gold basis.

(j) 100 piastres are equal to 1 Egyptian crown.

(k) The Indian rupee is stabilized at $^1/_{10}$ of the pound sterling; the par of the pound being $4.8665, the rupee par is $.04866.

Table No. Ib

Annual High and Low Exchange Quotation, 1918-1921

(Number of cents per unit of foreign currency)

	Unit of Currency	1921		1920		1919		1918	
		Low	High	Low	High	Low	High	Low	High
EUROPE		c.	c.	c.	c.	c.	c.	c.	
Austria	Crown	.19	.315	.22	.80	.51	3.25	......	......
Belgium	Belgian Franc	6.13	7.80	6.12	9.43	8.63	17.90	......	......
Bulgaria	Lei	1.15	1.35	1.02	2.85	2.25	6.00	......	......
Czecho-Slovakia	Crown	1.12	1.405	.90	2.81	1.50	6.67	......	......
Denmark	Crown	15.60	20.65	13.05	19.20	17.35	25.75	26.30	31.50
Finland	Finnish Mark	2.50	3.60	2.00	6.25	3.00	9.00	......	......
France	Franc	5.80	7.49	5.70	5.28	8 50	18.35	17 50	18.35
Germany	Mark	1.345	1.86	1.01	2.94	1.89	8.25	......	......
Great Britain	Pound	$ 3.5325	$ 3.92	$ 3.19	$ 4.0625	$ 3.6575	$ 4.7656¼	$4.76435	$4.76625
Greece	Drachma	6.95	7.75	7.10	15.00	15.38	19.80	19.41	19.52
Holland	Guilder	31.375	34.54	29.25	39.125	36.125	42.50	41.25	52.25
Hungary	Crown	.185	.25	.90	2.81	1.50	6.67	......	......
Italy	Lira	3.41	3.79	3.35	7.58	7.36	15.75	10.98	15.75
Jugo-Slavia	Dinar	2.74	2.90	2.12	6.90	4.20	13.00	......	......
Norway	Crown	15.60	19.65	13.05	20 53	19.55	28.25	27.10	33.25
Poland	Polish Mark	.115	.20	.12	90	.92	7.50	......	......
Portugal	Escudo or Milreis	8.65	10.40	......	......	......	......	......	......
Roumania	Lei	1.06	1.51	1.07	3.20	2.80	9.26	......	......
Russia	(Ruble) Exchange	......	......	......	......	......	......	......	......
Russia	Ruble—Pre-Rev. Currency	.40†	.675†	.35†	4.70	3.00	17.65	12.75	14.00
Spain	Peseta	13.15	14.25	11.80	19.20	18.75	22.05	19.65	30.75
Sweden	Crown	20.10	22.58	17.85	22.30	20.50	29.125	27.00	27.00
Switzerland	Swiss Franc	15.25	16.67	15.08	18.36	17.18	20.92	19.72	25.64
NORTH AMERICA									
Canada	......	$ .85	$ .94	$ .84⅛	$ .92¾	$ .9031¼	$ .973¾	......	......
Mexico	......	48.875	53.25	47.875	52.25	48.375	51.25	......	......
SOUTH AMERICA									
Argentine	Paper Peso	33.75	35.75	32.62	44.05	42.35	45.98	45.98*	......
Brazil	Milreis	148.75	162.5	138.75	278.75	24.50	33.00	27.14*	......
ASIA									
China (Shanghai)	Tãel	64.50	78.50	73.00	165.00	108.00	175.00	116.50*	......
India (Calcutta)	Rupee	26.50	29.75	26.00	50.00	42.00	46.25	39.50*	......
Japan	Yen	48.25	48.75	47.50	52.75	50.75	53.50	53.75*	......

*Average quotation.
†The quotations are for 100 Ruble notes, per ruble.

Table No. Ib

Annual High and Low Exchange Quotation, 1914-1917

(Number of cents per unit of foreign currency)

	Unit of Currency	1917		1916		1915		1914	
		Low	High	Low	High	Low	High	Low	High
EUROPE		c.	c.	c.	c.	c.	c.	c.	c.
Austria	Crown	10.60	11.80	10.98	15.25	12.95	17.50	17.30	20.32
Belgium	Belgian Franc								
Bulgaria	Lei								
Czecho-Slovakia	Crown								
Denmark	Crown	27.08	39.00			17.35	25.75	26.30	31.50
Finland	Finnish Mark								
France	Franc	17.11	17.63	16.47	17.21	16.61	19.35	19.23	23.52
Germany	Mark	66.375	73.125	65.8125	77.625	76.125	88.50	85.875	104.00
Great Britain	Pound	$ 4.7640	$ 4.7677	$ 4.740625	$ 4.78625	$ 4.51	$ 4.85125	$ 4.8595	$ 7.00
Greece	Drachma	19.45	20 07	19.32	19.53	18.92	19.44		
Holland	Guilder	40.125	45.50	40.75	45.00	39.3125	43.50	41.25	42.50
Hungary	Crown								
Italy	Lira	11.31	14.56	14.40	16.12	15.15	18.80		
Jugo-Slavia	Dinar								
Norway	Crown	27.90	38.00	27.35	31.15	24.23	28.10		
Poland	Polish Mark								
Portugal	Escudo or Milreis								
Roumania	Lei			26.90	31.00				
Russia	(Ruble) Exchange	21.00	24.45	29.25	33.75	29.75	44.875	42.00	51.75
Russia	Ruble—Pre-Rev. Currency								
Spain	Peseta	21.00	24.45	18.85	21.25	18.60	20.05		
Sweden	Crown	29.00	47.50	27.35	31.00	24.28	28.10		
Switzerland	Swiss Franc	19.41	23.47	18.77	20.24	18.14	19.12	19.16	21.50
NORTH AMERICA									
Canada									
Mexico									
SOUTH AMERICA									
Argentine	Paper Peso	47.65*		41.125	44.89	40.34	42.00		
Brazil	Milreis	26.90*		22.00	24.76	22.10	23.81		
ASIA									
China (Shanghai)*	Täel	120.00		89.00		63.00		64.75	
India (Calcutta)*	Rupee	40.00		33.00		53.50		33.00	
Japan*	Yen	52 18		51.00		50.50		49.90	

*Average quotation.

TABLE No. II.

Comparison between Exchange on London and the actual Purchasing Power of the Pound.

	I. U. S.: Bureau of Labor index numbers on the basis of 1913=100	II. United Kingdom: Statist index numbers on the basis of 1913=100	III. Per cent premium on \$1 goods in England $\left(\frac{\text{Col. II.}-\text{Col. I.}}{\text{Col. I.}}\times 100\right)$	IV. Exchange quotation (Pounds) corresponding to premium on goods (Col. III.)	V. Actual average monthly exchange rate (cable) Pounds	VI. Per cent premium on \$1 currency $\left(\frac{4.86-\text{Col. V.}}{\text{Col. V.}}\times 100\right)$	VII. Per cent undervaluation $\left(\frac{\text{Col. V.}-\text{Col. IV.}}{\text{Col. IV.}}\times 100\right)$
1918			%	\$	\$	%	%
OCT.	204	233	14	4.26	4.76 $\frac{7}{16}$	4	12
NOV.	206	230	12	4.33	4.76 $\frac{7}{16}$	4	10
DEC.	206	231	12	4.33	4.76 $\frac{7}{16}$	4	10
1919							
JAN.	202	244	21	4.01	4.76 $\frac{7}{16}$	4	19
FEB.	197	221	19	4.08	4.76 $\frac{7}{16}$	4	17
MAR.	200	217	09	4.47	4.67	4	4
APRIL	203	217	07	4.54	4.66	4	3
MAY	207	229	11	4.37	4.66	4	7
JUNE	207	235	14	4.26	4.62	5	8
JULY	219	243	11	4.37	4.38	11	0
AUG.	226	250	16	4.18	4.26	14	2
SEPT.	221	253	18	4.11	4.18	16	2
OCT.	223	264	18	4.11	4.19	16	2
NOV.	220	272	17	4.15	4.09	19	—1
DEC.	238	277	16	4.18	3.83	27	—8
1920							
JAN.	248	289	23	3.95	3.68	32	—7
FEB.	249	306	22	3.98	3.39	44	—15
MAR.	253	308	18	4.11	3.72	31	—9
APRIL	265	313	12	4.33	3.93	24	—9
MAY	272	306	12	4.33	3.85	27	—11
JUNE	269	301	12	4.33	3.95	23	—9
JULY	262	299	14	4.26	3.86	26	—9
AUG.	250	298	21	4.01	3.63	34	—9
SEPT.	242	292	21	4.01	3.52	38	—12
OCT.	225	282	25	3.88	3.47	40	—11
NOV.	207	263	27	3.82	3.43	42	—10
DEC.	189	243	28	3.79	3.63	34	—4
1921							
JAN.	177	232	31	3.70	3.73	30	1

Col. I. and II. Index numbers are average monthly index numbers; see also footnote 28, page 18.

Col. IV. Shows what the exchange quotation should have been if it had corresponded to the relative level of prices existing in the U. S. and Great Britain.

Col. VII. Shows the per cent of undervaluation, assuming the index numbers accurately reflect the relative prices of goods actually or potentially entering foreign trade; wherever minus, the exchange is lower than warranted by price considerations and vice versa.

The pound was therefore overvalued while the exchanges were stabilized and a short time after the "Peg" was removed. Thereafter (sterling) exchange was undervalued. In January, 1921, however, exchange had exceeded its purchasing power parity.

TABLE No. III.

Comparison between Exchange on Paris and the actual Purchasing Power of the Franc.

	I. U. S.: Bureau of Labor index numbers on the basis of 1913=100	II. France: Statistique Generale index numbers on the basis of 1913=100	III. Per cent premium on $1 goods in France $\left(\frac{\text{Col. II.}-\text{Col. I.}}{\text{Col. I.}}\times 100\right)$	IV. Exchange quotation (Francs) corresponding to premium on goods (Col. III.)	V. Actual average monthly exchange rate (cable) Francs	VI. Per cent premium on $1 currency $\left(\frac{23.8-\text{Col. V.}}{\text{Col. V.}}\times 100\right)$	VII. Per cent undervaluation $\left(\frac{\text{Col. V.}-\text{Col. IV.}}{\text{Col. IV.}}\times 100\right)$
1918			%	Cents	Cents	%	%
OCT.	204	360	76	10.9	18.3	05	68
NOV.	206	358	74	11.0	18.3	05	66
DEC.	206	353	71	11.2	18.3	05	63
1919							
JAN.	202	348	73	11.1	18.3	05	65
FEB.	197	340	73	11.1	18.3	05	65
MAR.	200	337	69	11.4	17.7	09	55
APRIL	203	332	64	11.1	16.7	16	50
MAY	207	327	58	12.2	15.8	22	30
JUNE	207	330	59	12.1	15.6	23	29
JULY	219	350	60	12.0	14.4	34	20
AUG.	226	349	55	12.4	12.8	51	3
SEPT.	221	362	45	13.3	11.1	74	—17
OCT.	223	384	73	11.1	11.6	66	5
NOV.	230	407	77	10.9	10.7	81	—1
DEC.	238	425	78	10.8	9.2	108	—15
1920							
JAN.	248	489	97	9.7	8.6	125	—11
FEB.	249	525	111	9.1	6.9	178	—24
MAR.	253	557	121	8.7	7.2	168	—17
APRIL	265	591	123	8.6	6.3	209	—27
MAY	272	553	103	9.5	6.8	184	—28
JUNE	269	493	83	1.05	7.9	145	—24
JULY	262	496	89	10.2	8.1	137	—21
AUG.	250	501	101	9.6	7.2	169	—25
SEPT.	242	526	106	9.3	6.7	187	—28
OCT.	225	502	123	8.6	6.5	196	—24
NOV.	207	460	122	8.6	6.0	221	—30
DEC.	189	435	130	8.3	5.9	227	—29
1921							
JAN.	177	406	129	8.4	6.5	198	—23

Col. I. and II. Index numbers are average monthly index numbers; see also footnote 28, page 18.
Col. IV. Shows what the exchange quotation should have been if it had corresponded to the relative level of prices existing in the U. S. and France.
Col. VII. Shows the per cent of undervaluation, assuming the index numbers accurately reflect the relative prices of goods actually or potentially entering foreign trade; wherever minus, the exchange is lower than warranted by price considerations and vice versa. The franc was therefore overvalued while the franc exchange abroad was supported by the Bank of France. Thereafter it was undervalued.

TABLE No. IV.

Comparison between Exchange on Berlin and the actual Purchasing Power of the Mark.

	I. U. S.: Bureau of Labor index numbers on the basis of 1913=100	II. Germany: Frankfurter Zeitung index numbers on the basis of 1913=100	III. Per cent premium on $1 goods in Germany $\left(\frac{\text{Col. II.—Col. I.}}{\text{Col. I.}}\times 100\right)$	IV. Exchange quotation (Marks) corresponding to premium on goods (Col. III.)	V. Actual exchange rate (cable) Marks	VI. Per cent premium on $1 currency $\left(\frac{\text{23.8—Col. V.}}{\text{Col. V.}}\times 100\right)$	VII. Per cent undervaluation $\left(\frac{\text{Col. V.—Col. IV.}}{\text{Col. IV.}}\times 00\right)$
1920			%	Cents	Cents	%	%
1 JAN.	248	1038	318	5.69	2.06	1056	—64
1 FEB.	249	1427	473	4.15	1.07	2125	—74
1 MAR.	253	1547	511	3.89	1.03	2212	—74
1 APRIL	265	1568	491	4.02	1.43	1565	—64
1 MAY	272	1443	430	4.49	1.71	1292	—62
1 JUNE	269	1515	463	4.22	2.60	816	—38
1 JULY	262	1411	438	4.42	2.62	809	—41
1 AUG.	250	1507	502	3.95	2.28	944	—42
1 SEPT.	242	1526	530	3.77	2.01	1084	—47
1 OCT.	225	1515	573	3.53	1.64	1352	—54
1 NOV.	207	1504	626	3.27	1.29	1753	—61
1 DEC.	189	1587	739	2.83	1.47	1520	—48
1921							
7 JAN.	177	1443	715	2.92	1.38	1625	—53

Col. I. and II. Index numbers are average monthly index numbers; see also footnote 28,, page 18.
Col. IV. Shows what the exchange quotation should have been if it had corresponded to the relative level of prices existing in the U. S. and Germany.
Col. VII. Shows the per cent of undervaluation, assuming the index numbers accurately reflect the relative prices of goods actually or potentially entering foreign trade; wherever minus, the exchange is lower than warranted by price considerations and vice versa.
The large undervaluation shown in Column VII is either completely or to a large extent offset by the practice of the German exporter of quoting prices at some multiple (e.g. 5) of the inland price.

COLUMBIA TRUST COMPANY

NEW YORK

MAIN OFFICE, 60 BROADWAY

UPTOWN OFFICE	358 FIFTH AVENUE
HARLEM BRANCH	100 WEST 125TH STREET
BRONX BRANCH	148TH STREET AND 3RD AVENUE

STATEMENT, DECEMBER 31, 1920

ASSETS

Cash on Hand	$ 1,097,107.77
Cash in Banks and Exchanges	19,605,077.82
Foreign Exchange	2,179,391.38
U. S. Government Bonds and Notes	3,215,243.60
State and Municipal Bonds	1,950,927.24
Short Term Securities	4,026,139.86
Other Bonds and Stocks	9,951,667.10
Loans and Bills Purchased	56,994,348.87
N. Y. City Mortgages	4,490,649.86
Real Estate	3,946,372.51
Customers' Liability on Acceptances and Commercial Letters of Credit	11,436,233.67
Accrued Interest Receivable	386,138.30
	$119,279,297.98

LIABILITIES

Capital Stock	$ 5,000,000.00
Surplus and Undivided Profits	7,608,283.65
Deposits	91,674,987.70
Mortgage on Real Estate	115,250.00
Reserve for Taxes	458,650.27
Bills Payable	2,000,000.00
Acceptances	10,158,514.97
Commercial Letters of Credit	1,277,718.70
Contingent Liability on Domestic and Foreign Bills Sold	920,393.71
Accrued Interest Payable	65,498.98
	$119,279,297.98

COLUMBIA
TRUST
COMPANY